

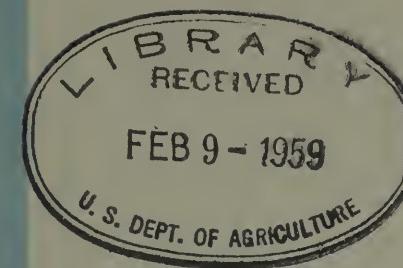
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Veterinary

Administrator

Development

Program

## 4th Conference Report

Animal Disease Eradication Division  
in cooperation with  
Animal Inspection and Quarantine Division  
AGRICULTURAL RESEARCH SERVICE

U. S. DEPARTMENT OF AGRICULTURE



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## INTRODUCTION

THE NEED - A retirement eligibility study of Veterinarians in Charge of Animal Disease Eradication field stations and their assistants revealed that a large number were either eligible for retirement or would reach the mandatory retirement age within the next few years. There is not an adequate reserve of trained replacements at this time.

THE PLAN - Originally, a committee of five Washington officials was appointed to plan and administer a program to meet this need. Nine Animal Disease Eradication field stations, the New York Port station, and the Chicago Stockyards station were selected as training duty stations where special GS-11 training positions were established. Minimum qualification standards were established and nominations were solicited from officials in charge of all Animal Disease Eradication and Animal Inspection and Quarantine stations. Nominations were screened and 17 Veterinarians were selected for participation in a one-week conference in Washington. Officials in charge of the nine training stations and the officials in charge of the New York Port station and the Chicago Stockyards station had previously participated in a one-week preparatory conference in Washington at the time of the First Special Development Program for Veterinarians. A plan for use at training duty stations was developed by participants of each conference. Eleven of the seventeen trainees were selected by the committee. Later, two additional veterinarians were selected for this training. The trainees were given temporary promotions to GS-11, where necessary, and assigned to the training positions. From experience gained in the previous schools, it was determined that training at Laredo, Texas, should be included in the course. The schedules were arranged with training periods of one month duration at Chicago, New York, and Laredo, with training periods of three months duration at two field training stations. Training at these stations is to be conducted in accordance with the plan developed by the participants of the two conferences with monthly reports submitted by both trainer and trainee.

During a special work conference held in Cleveland, Ohio on August 16 and 17, 1957 four committees were impanelled to discuss types of training, methods of evaluation, training schedules and selection of trainees. From consultation of the four committees it was determined to increase the number of training stations to ten, and arrange for the trainee to observe the operations at a Meat Inspection station and at an AIQ Biological Products Inspection and Licensing station.

Dr. Miller of the ADE field station Phoenix, Arizona has been designated as the coordinator of the Veterinary Administrative Development Program.

THIS REPORT - This is a report of the Fourth Annual Conference as the initial phase of the Veterinary Administrative Development Program.



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Saulmon, Dr. E. E. - Assistant Director, ADE Division  
Clarkson, Dr. M. R. - Deputy Administrator for Regulatory Programs  
Somers, Dr. R. K. - Head, Inspection Procedures Section , MI.Division  
Heemstra, Dr. L. C. - Director, Animal Inspection and Quarantine Division  
Hejl, Dr. J. M. - Head, Biological Products Licensing Section, AIQ  
Tellejohn, Dr. A. L. - Head, Biological Products Inspection Section, AIQ  
Hourrigan, Dr. J. L. - Chief, Special Disease Eradication Section, ADE  
Ranney, Dr. A. F. - Chief, Tuberculosis Eradication Section, ADE  
Mingle, Dr. C. K. - Chief, Brucellosis Eradication Section, ADE  
Martin, Dr. J. J. - Chief, Interstate Regulations Enforcement Section, ADE  
Williams, Dr. J. E. - Chief, Program Services Section, ADE  
Omohundro, Dr. R. E. - Chief, Poultry Disease Section, ADE  
Cole, Dr. T. W. - Chief, Public Stockyards Section, ADE  
Mulhern, Dr. F. J. - Chief, Vesicular Exanthema Eradication Section, ADE  
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Bjorklund, Mr. O. E. - Assistant to the Director, Administrative Services Division  
Duffy, Mr. H. C. - Head, Supply Management and Purchasing Section  
Harrover, Mr. L. E. - Chief, Property Management Branch,  
Barrick, Mr. C. D. - Substituting for P. C. Wirth, Chief, Records Management Branch  
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Struttmann, Mr. E. L. - Assistant Director, Budget and Finance Division  
Moore, Mr. E. G. - Director, Information Division  
McAuley, Mr. J. P. - Assistant Director, Personnel Division  
Harris, Mr. R. B. - Chief, Management Research and Analysis Staff  
Kern, Mr. J. C. - Training Officer, Forest Service  
Leffler, Mr. W. F. - Chief, Employment and Placement Branch, Personnel Division



Conference Discussion Leaders Continued

Moser, Mr. D. F. - Management Analyst, Management Research & Analysis Staff

Knierim, Mr. P. K. - Business Manager, Eastern Regional Business Office

Sykes, Mr. A. L. - Chief, Classification and Wage Branch, Personnel Division

Biehl, Mr. W. J. - Assistant Chief, Employee Relations Branch, Personnel Division

Harper, Mr. D.E. - Supervisory Safety Engineer

Morgan, Mr. R. W. - Administrative Officer - ADE Division

Van Houweling, Dr. C. D. - Director, Livestock Regulatory Programs



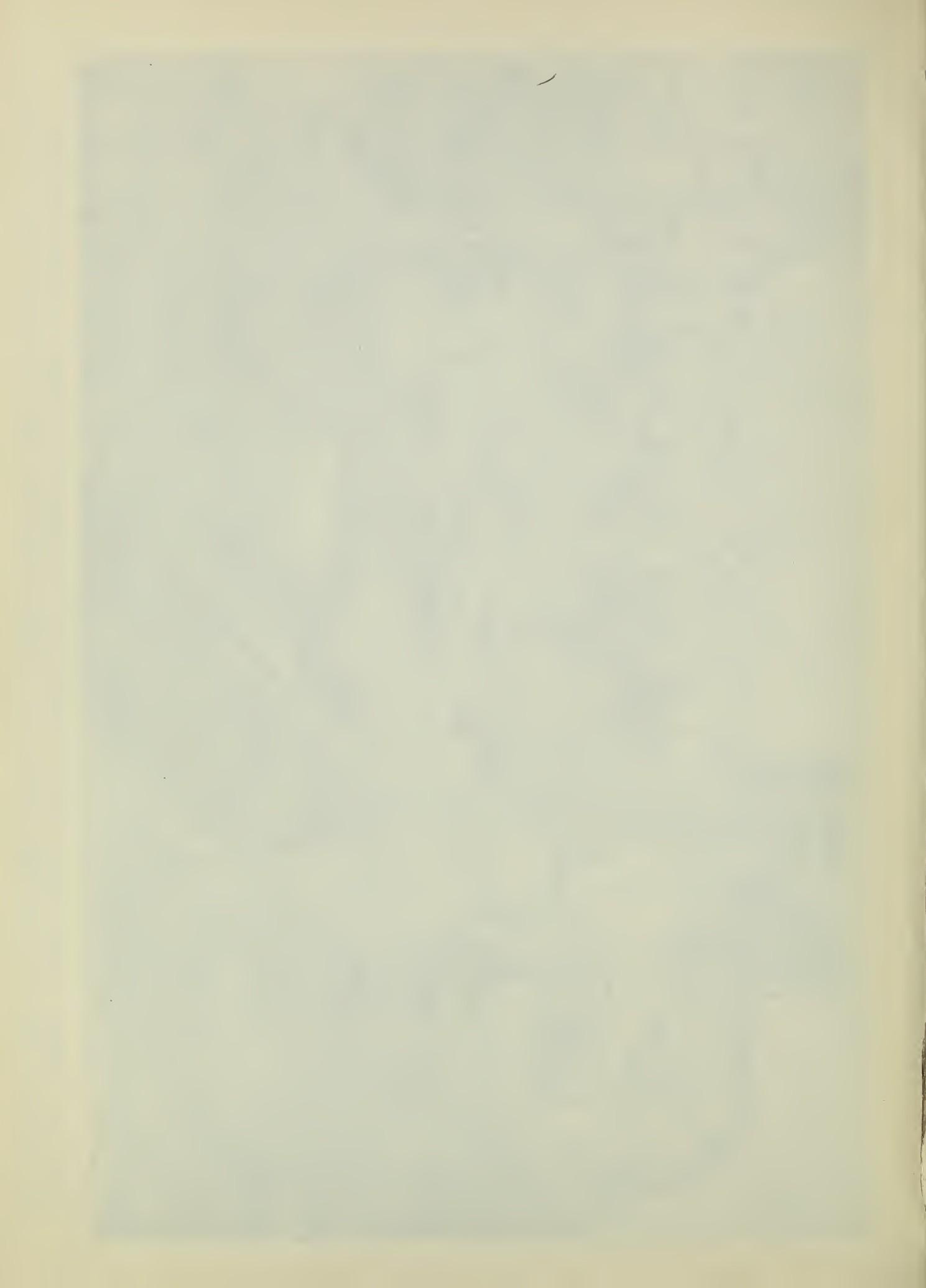


PARTICIPANTS: Seated; left to right: Dr. Kelsey, Dr. Berg, Dr. Moon, Dr. Honstead, Dr. Zimmerman, Dr. Finch, Dr. Reynolds, Dr. Gorder, Dr. Van Gorder, Dr. Seay. Standing; left to right; Dr. Tweed, Dr. Hughes, Dr. Allen, Dr. Ranney, Dr. Saulmon, Dr. Somers, Dr. Anderson, Dr. Van Houweling, Dr. Cole, Dr. Heemstra, Dr. Mulhern, Dr. Hummon, Mr. Hedin, Dr. Evans, Dr. Martin, Dr. Scott, Dr. Gartman, Dr. Strieber.





VETERINARIANS ATTENDING: Seated; left to right: Dr. Berg, Dr. Moon, Dr. Honstead, Dr. Zimmerman, Dr. Anderson, Dr. Finch, Dr. Reynolds, Dr. Garlick, Dr. Van Gorder. Standing; left to right: Dr. Kelsey, Dr. Tweed, Dr. Hughes, Dr. Allen, Dr. Evans, Dr. Gartman, Dr. Scott, Dr. Strieber, Dr. Seay.



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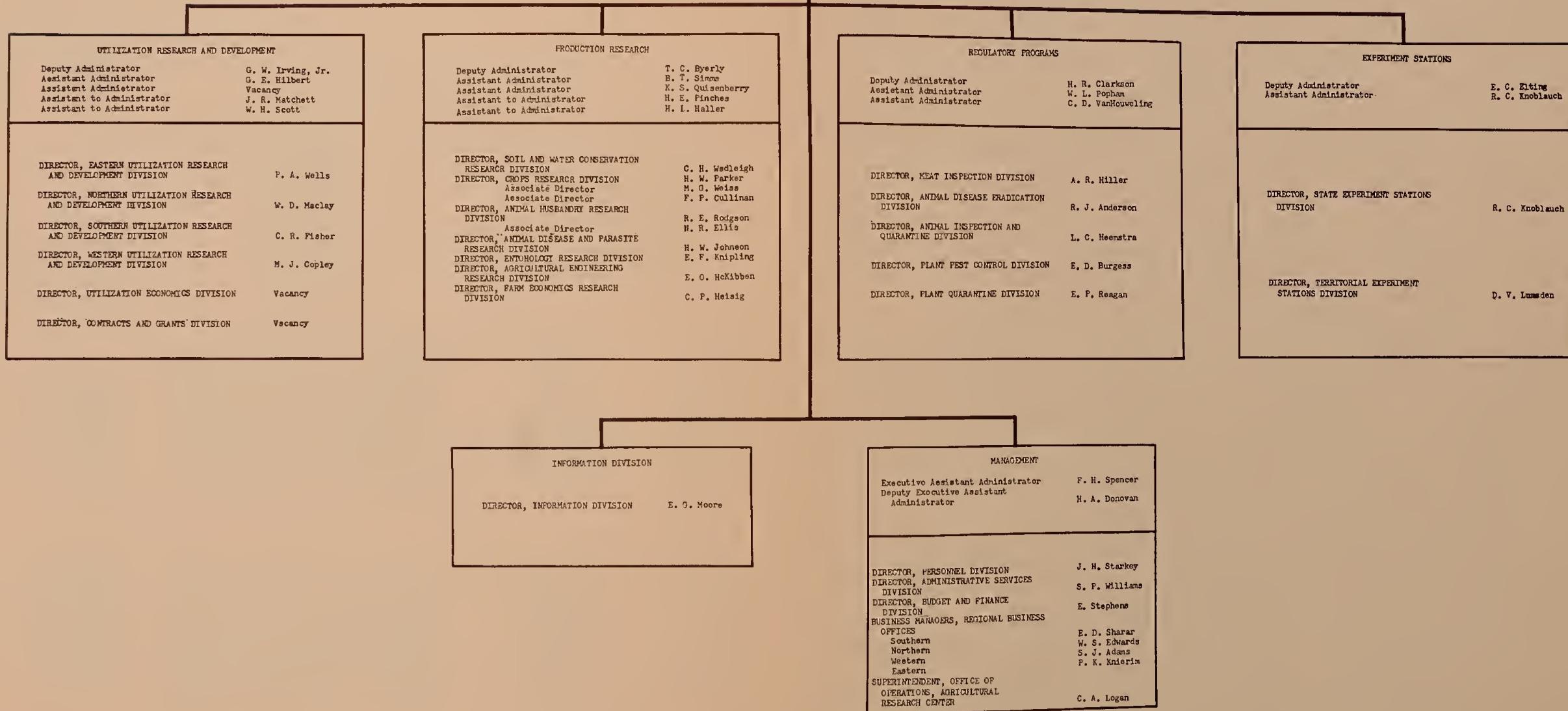
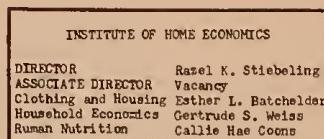
RECOMMENDED:

/s/ B. T. Shaw  
Administrator, Agricultural Research Service

APPROVED:

/s/ E. L. Peterson  
Assistant Secretary

DATE: February 15, 1957





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INTRODUCTIONS-STatement OF CONFERENCE OBJECTIVES

By  
Dr. E. E. Saulmon

On behalf of the Agricultural Research Service and particularly the Animal Disease Eradication and Animal Inspection and Quarantine Divisions, I welcome you to the Fourth Veterinary Development Conference.

I wish to extend Dr. Anderson's regrets for not being able to be here this morning but it was necessary that he be out of town. He anticipates returning during the week so that he can meet with you and get better acquainted with you.

May I explain briefly to you how the Veterinary Development Program came about. Approximately five years ago when we were still the Bureau of Animal Industry, our personnel people made a survey of our top supervisory positions and came up with some rather surprising information. They found that during the next few years a large number of our veterinarians in charge of field stations and their assistants would reach mandatory retirement age within the next five to ten years. Of course, it was recognized that some would retire of their own volition before that time. Up to this time within the history of the Bureau of Animal Industry, replacements for assistants and veterinarians in charge were selected in a rather haphazard manner. At least there was no concerted attempt to see that such personnel were properly trained to assume their new responsibilities. Even though most of the selections to fill the top field supervisory positions worked out exceptionally well, there were cases where the choice unfortunately was not so good. It was recognized that steps should be taken within our organization to prepare men so that they would be in a better position to fill the vacancies due to occur. A committee was organized within the Bureau of Animal Industry to develop a program that would meet these needs. It was decided that certain field stations should be designated as training stations and that personnel would be selected from our field forces to be detailed to the stations so that they could become better acquainted with the functions of field activities in the capacities of assistants and veterinarians in charge.

The veterinarians in charge of field stations are asked to submit nominations for the Veterinary Development Program to the Washington office. Area Directors are requested to become better acquainted with the nominees and observe them in their routine assignments. The Washington staff then convene in conference style and select those that are requested to attend the Veterinary Development Conference here in Washington. Usually more trainees are selected from the list of nominees than there are training stations, and the trainees are evaluated during the week that they are attending the Veterinary Development Conference as to their potential abilities as veterinarians in charge. We certainly hope that all of you will display those qualifications that will secure for you the opportunity to continue in the Program.

During the coming week you will have the opportunity to learn more of the activities and functions of the Agricultural Research Service. All phases of the different administrative responsibilities will be explained to you by individuals who conduct those activities here. A lot of this information will be new to you because heretofore in your position assignments it has not been necessary that you know of requirements for the administrative side of our field activities...you have been concerned with the program functions. Because of the limitations of time and the volume of the information being brought to you this week those speaking to you, of necessity, will cover their fields hurriedly. You will become acquainted with Budget and Finance policies, Administrative Services activities, Personnel administration, and general administrative responsibilities in addition to program functions within the Animal Disease Eradication, Animal Inspection and Quarantine, and Meat Inspection Divisions. However, we want to impress upon you that you should feel free to ask questions to clarify points at any time. If there should be times that you would hesitate to interrupt the speaker, make a note of your question and be sure to ask it at the close of his talk. The speakers will be glad to more fully explain the point that is called to their attention. We hope you recognize that you are here to learn this week. All of us are here before you this week to help you. However, what you learn will be dependent to a great degree upon you. This week will be a strenuous one because a full agenda has been prepared, but I feel also that it will be a profitable one for you and for those of us who meet with you.

Following this week's Conference, selections will be made of those who will continue the Program. In the past the selected trainees have been detailed at two field stations for program and administrative training for a period three months at each station. You will also spend approximately four weeks at the Chicago Union Stockyards for training in that phase of the work. Animal Inspection and Quarantine activities will be learned at the port of New York and at Laredo, Texas. While in Laredo you will be indoctrinated in the activities of the fever tick quarantine program. You will be instructed in the administrative functions of each of these stations. All of this training will make for a better ARS employee, and eventually a qualified field station administrator. The vacancies that occur as assistants at our field stations will be filled from the group that have received this Veterinary Development Program training. If there are no vacancies in that capacity at the close of your development training, you will be returned to your former station to assume similar duties that you are doing at this time until such a vacancy occurs. All of you are to be commended for the abilities that you have displayed in the past to warrant your selection for this week's Conference for the Veterinary Development Program. This selection displays the confidence that your supervisors have in your capabilities.

We certainly extend to you our best wishes for this week and the training to come, and wish to assure you that if we can be of any assistance at all during the coming week, please feel free to call on us.

ORGANIZATION AND FUNCTIONS OF THE ARS AS  
RELATED TO LIVESTOCK REGULATORY PROGRAMS

Dr. M. R. Clarkson's discussion on the organization and the functions of ARS as related to Livestock Regulatory Programs was given extemporaneously. Therefore, his speech was not documented for presentation in the Conference Report of the Fourth Veterinary Administrator Development Program.



FEDERAL MEAT INSPECTION AS RELATED TO  
ADE AND PREVENTIVE PROGRAM ACTIVITIES

by  
Dr. R. K. Somers

The Federal Meat Inspection organization consists of over 3,000 meat inspectors and veterinarians. These are located in over 500 cities and towns throughout the country and conduct inspection in approximately 1,200 slaughtering and/or processing establishments. The inspector in charge of each station, of which there are about 160, has been delegated full responsibility to carry out the provisions of the Meat Inspection Regulations in the area under his Supervision. He receives general supervision in the form of a periodic survey of establishments by area directors, who represent the Office of the Director of the Meat Inspection Division.

The Washington organization of the Meat Inspection Division consists of the Office of the Director and eight staff offices, each having responsibility for a certain part of the total meat inspection program. These staff offices are Animal Foods Inspection, Inspection Facilities, Inspection Procedures, Trade Labels, Army Contract Services, Special Projects, Chemical Control and Biological Control.

Federal meat inspection is authorized by the Meat Inspection Act and has just completed its 50th Anniversary. The Meat Inspection Act provides for the Secretary of Agriculture to issue such regulations that are necessary to carry out the provisions of the Act. Briefly these provisions are designed to assure wholesomeness of meat and meat food products which are used for human food and to assure that such products are truthfully labeled when distributed from inspected establishments.

There is nothing in the Meat Inspection Act, Import Meat Act, and Horse Meat Inspection Act which provides for the control of animal diseases that may be present in domestic food animals. For many years meat inspectors have furnished assistance to those engaged in animal disease eradication control activities in a great many ways. In some cases there was not a realization on the part of meat inspectors or ADE ~~control~~ officials that the meat inspection employee was not conducting ADE activities under the authority of the Meat Inspection Act.

Probably the most important way in which meat inspectors aid animal disease control programs is by removing sources of infection as animals are brought to slaughter. The control over condemned product in Federally inspected establishments, combined with rendering procedures and a high standard of sanitation maintained in these plants results in infectious material being handled in such a manner that it no longer constitutes a threat to other animals.

Meat inspectors frequently report disease conditions which are found on ante mortem and post mortem inspection giving sufficient information so that the disease control officials can locate the origin of the diseased animal

and take appropriate control action. Meat inspectors also provide services such as supervising the cleaning and disinfecting of trucks which have been used to haul animals infected with an infectious disease. In performing this service it should be clearly understood that meat inspectors are acting under delegated authority from the ADE Division, since this area of work has no connection with the meat inspection responsibility.

## THE ACTIVITIES OF THE ANIMAL INSPECTION AND QUARANTINE DIVISION

by  
Dr. L. C. Heemstra

One of the two principal functions of the AIQ Division is to protect the Nation against the introduction and dissemination of animal and poultry diseases of foreign origin. The other is the control over the production and distribution of veterinary biological products in interstate and foreign commerce. Both are preventive veterinary medicine.

Other staff members of the Division have explained the procedures under laws and regulations whereby we may be assured as to the purity, safety and potency of veterinary biological products. This discussion has to do with the threat of foreign diseases and our enforcement of applicable laws and regulations. This paper also briefly discusses the regulations relating to the export shipment of livestock to foreign countries.

Preventive veterinary medicine, by law and regulation, had its beginning in the United States in the establishment of the Bureau of Animal Industry in 1884. It was then necessary for this country, in order to gain acceptance of our livestock in foreign markets, to eradicate contagious pleuropneumonia. This was successfully accomplished. We now have laws and regulations to guard against the reintroduction of contagious pleuropneumonia and other devastating diseases such as dourine and glanders, splenetic or tick fever, fowl plague and a lethal form of Newcastle disease, African swine fever, and other contagious and communicable diseases. A specific law (19 U.S.C. 1306) prohibits the importation of domestic livestock from any country declared to be infected with foot-and-mouth disease or rinderpest.

### IMPORTATION OF LIVESTOCK FROM CANADA AND MEXICO

There is good working relationship with both countries and fortunately both are free from the foreign diseases we especially dread. There is a common interest in maintaining such freedom. Mexico, however, has the problem of cattle fever ticks and dourine and glanders in equine stock, which is particularly troublesome in respect to stray or smuggled animals.

The hazards of disease introduction across our land borders are typified by conditions occurring during 1946 - 1954. Foot-and-mouth disease existed in Mexico during most of those years and an outbreak of limited extent occurred in Canada within 50 miles of the border. During the time the disease existed in Canada and Mexico the importation of cattle, sheep, goats and swine was prohibited, as well as the fresh or frozen meats from such animals.

But the prohibitions and their strict enforcement were not the solutions to all problems. To protect against illegal entries from Mexico there was established a border patrol of approximately 700 men in jeeps, on horseback, and in airplanes. They seized and destroyed more than 3,600 stray and smuggled animals and thousands of pounds of meats and other potentially dangerous products.

The problems in respect to illegal entries from Canada were troublesome because of the relatively unrestricted commerce with the United States for many years, involving scheduled airline flights, railroad routes crossing and recrossing the border, the use of international highways and joint ownership of land adjacent to the border. The necessary curtailment of commerce resulted in large economic losses to both countries.

Normally, there must be maintained between the United States and Canada and Mexico precautions against all communicable and infectious diseases. Now, when there is an all-out effort to eradicate brucellosis in the United States, it is particularly necessary that the AIQ Division do everything possible to prevent introduction of the disease from Canada and Mexico. Scrapie in sheep is another case in point, even though the disease exists in both Canada and the United States. The eradication of scrapie in this country is intimately related to the eradication of the disease in Canada.

Dourine and glanders in equine stock and splenetic or tick fever are known to be present in Mexico. More than 224,000 cattle and 18,000 burros and horses were imported from Mexico last year. To guard against reintroduction of these diseases into the United States, all equines were blood tested for dourine and glanders and all cattle were given precautionary dipping against fever ticks and/or scabies.

#### IMPORTATION OF ANIMALS AND POULTRY THROUGH AIR AND OCEAN PORTS OF ENTRY

In the past, we have looked upon a number of animal diseases as problems that were peculiar to Asia, Africa, Europe, or wherever they happened to be. We enjoyed a time factor in the importation of livestock into this country. Shipments of livestock by sea from Europe, Asia or Africa took from 15 to 40 days. This period of time provided an opportunity for most diseases to develop signs that could be observed, and proper control measures carried out prior to, or at time of arrival.

International travel and freightage continue to increase with development of improved, fast transportation. Ship dockings have doubled and international air flights have increased 17-fold since pre-war. 6,500 animals entered through our air and ocean ports last year.

Even our livestock travel by plane in this air age. 76 percent of the poultry, 54 percent of the horses, and 1 out of 9 sheep, goats, hogs, and ZOO animals that are imported from overseas come in by air.

Livestock travel may be quicker than the incubation of its diseases - too quick for symptoms of diseases to show up.

To protect our fourteen billion dollar livestock industry from possible epizootics disseminated by imported animals, four carefully enforced control measures are accomplished. They are:

1. A permit is issued to the importer after a determination is made that the animal is a species eligible for entry from a country free of dangerous diseases.

2. A veterinarian, salaried by the country of origin, conducts a thorough examination of the animal and area, and certifies that the animal is in good health and is from a district free of serious contagious diseases.

3. An Animal Inspection and Quarantine Veterinarian carefully examines the animal on arrival to see that there is no evidence of contagious or infectious diseases.

4. The animal is quarantined for observation and tests as a final determination that the animal will not endanger our livestock's health.

Last year 491 of the animals offered for entry were placed in quarantine. This included certain equines, domestic ruminants and swine, and a wide variety of wild (zoo-type) animals such as okapis, bison, gazelles, etc. Sixteen animals died in quarantine or were rejected, including a waterbuck, a giraffe and several other species. Of 6,399 poultry quarantined, 534 died or were rejected.

At least two outbreaks of foot-and-mouth disease in the United States were associated with the feeding of raw garbage from ships. To prevent this from happening again, no garbage from foreign meats may be brought off any vessel unless it is in a tight container and brought off for incineration under the supervision of an Animal Inspection and Quarantine Inspector. Over 366 tons of garbage were incinerated within a recent six month period.

#### EXPORTATION OF ANIMALS

The AIQ Division also administers the Department's regulations which have to do with the exportation of animals. Such regulations are designed to assure, so far as possible, that only healthy animals are exported. Foreign governments have come to respect our export regulations and the integrity of their enforcement. This has resulted in a healthy and ever expanding foreign trade in livestock.

Over 62 thousand animals were inspected and certified last year in the various states of origin for shipment to Canada and Mexico. These animals were recertified by Animal Inspection and Quarantine Veterinarians, or veterinarians representing the receiving country, at the international border.

To assure that only healthy animals are exported to countries overseas, approximately 20 thousand head of livestock were inspected and certified by AIQ Veterinarians prior to shipment from air and ocean ports last year. All vessels used in the transportation of livestock were inspected to see that requirements as to space for animals, feed and water, ventilation, attendants, etc. were complied with. Over the years this has reduced the livestock shipping loss from about 4 per hundred to less than one of each 500 animals shipped.

## RESTRICTED PRODUCTS

Supervision is maintained over the entry of hides and skins; wool, hair and bristles; gluestock, bones, horns and hoofs; bonemeal, tankage and similar products; glands, oxgall and like materials; and hay and straw. Such products (except bones and bonemeal) are permitted unrestricted entry from countries not declared to be infected with rinderpest or foot-and-mouth disease.

From countries so infected, some animal byproducts are permitted entry only when consigned direct from the port of entry, under Government seal, to previously approved establishments for handling and processing in a manner designed to guard against the spread of diseases.

Because anthrax, which is known to exist in nearly every country of the world, is most likely to be introduced through importations of bones, horns, hoofs and bonemeal, special regulations are applicable to them.

Strict precautions also are taken in connection with the importation of restricted foreign-cured meats from countries infected with rinderpest or foot-and-mouth disease. Even though cured meat is permitted entry under the law, it is considered a possible means of introducing the virus of rinderpest or foot-and-mouth disease. Added safeguards therefore have been set up. It is believed they remove any danger to the livestock industry. Such meats, when cured or cooked, are permitted entry subject to definitely established regulatory procedures.

Our inter-continental tourists of today also provide a potential hazard that is of concern. Many people upon entering or returning to this country bring gifts of great quantities of dried sausage, salamis and other meat delicacies in their baggage. Others attempt to send these products through the mail or by express to people in this country. 93,000 pounds of prohibited and restricted meats, from these sources, were seized by Customs and disposed of under the supervision of the Animal Inspection and Quarantine Division. These items are potentially dangerous because most of these sausages are made from ground beef, pork and veal-seasoned and dried, but not cooked. The danger lies in the fact that a lot of our people might care little for such products and may throw them into the garbage can, and from there it might be fed to livestock.

## SUMMARY

Animal Inspection and Quarantine Division programs are concerned with:

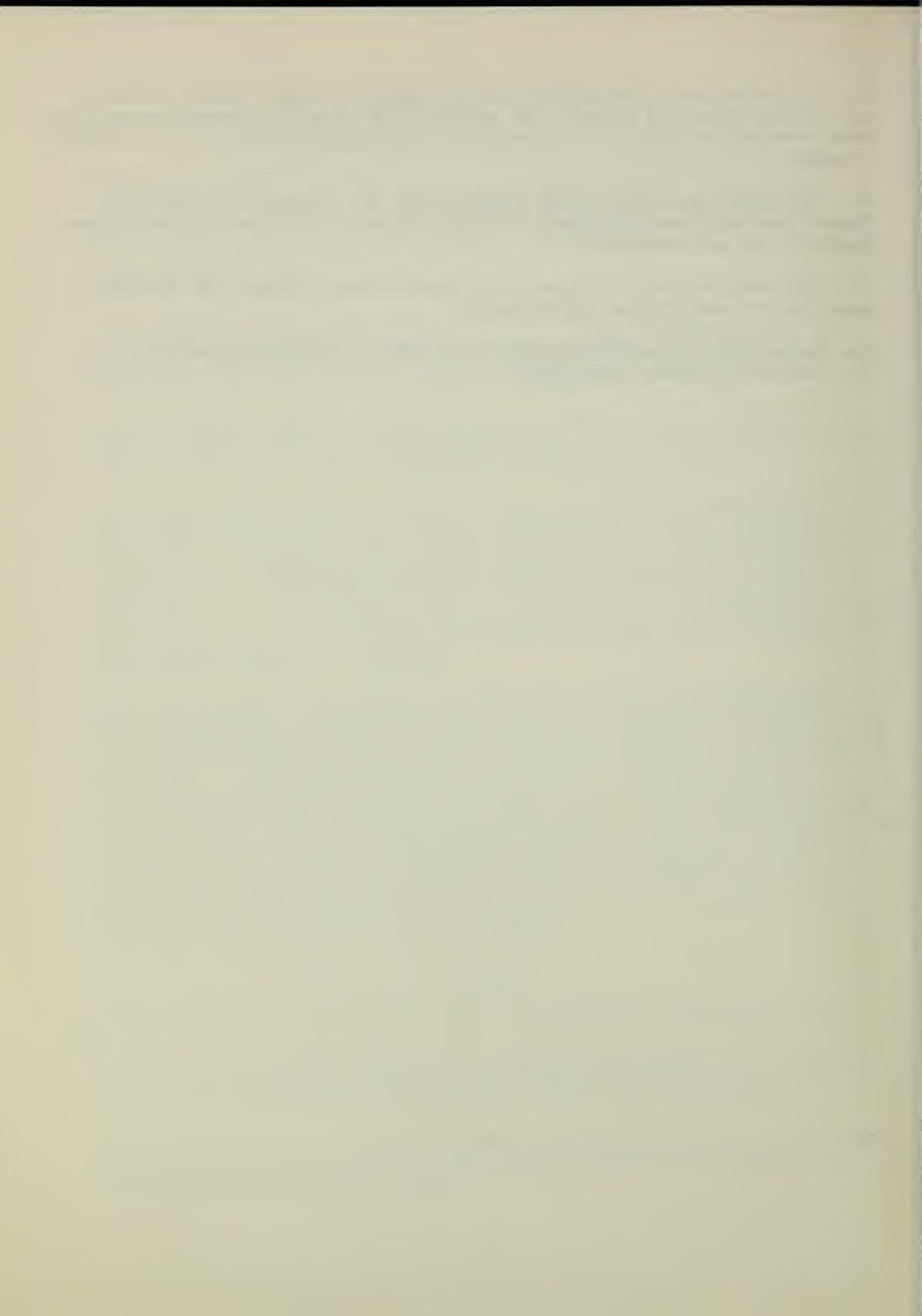
1. The production and marketing, in interstate and foreign commerce, of veterinary biological products to prevent the production and sale of such products which are worthless, dangerous, harmful or contaminated.
2. The enforcement of federal inspection and quarantine measures at ports of entry to prevent the introduction and dissemination of livestock and poultry diseases of foreign origin.

3. The control over the handling and processing of meats, animal products and related materials entering the country under permit or other restrictions, also intended to prevent the introduction and dissemination of foreign animal diseases.

4. The inspection, testing and certification of livestock for export to insure that only healthy animals are exported and to provide for their humane handling and safe transport.

5. The certification to Customs of purebred animals offered for duty-free entry by citizens of the United States.

6. The handling of anti-hog-cholera serum and hog-cholera virus under the Marketing Agreement and Order.



## BIOLOGICAL PRODUCTS LICENSING

by

Dr. J. M. Hejl

The activities associated with veterinary biological products are located in the Biological Products Licensing Section and in the Biological Products Inspection Section of the AIQ Branch. Dr. Gooding told you that I am Head of the Licensing Section and Dr. Tellejohn is Head of the Inspection Section. We administer the Virus-Serum-Toxin Act of March 4, 1913 which provides that no virus-serum-toxins or analogous products shall be produced and marketed interstate unless produced under a U. S. Veterinary license. No virus-serum-toxin or analogous products shall be marketed which are worthless, contaminated, dangerous or harmful. Conversely, these products must have merit and serve the purpose for which they are intended. The Secretary of Agriculture, under the law, is authorized to promulgate rules and regulations. Our regulations are found under CFR Title 9, Parts 101 to 123. The rules and regulations are quite detailed for the production of hog cholera serum and hog cholera virus. These two products are produced according to procedures prescribed in the regulations. Dr. Tellejohn will probably discuss the inspection of those two products. The regulations are less detailed and they are more general for all products other than serum and virus. These other products are usually a result of the research conducted by the individual firms involved. They are produced according to outlines of production filed with the Branch and of course, the outlines have to be found acceptable to the Branch.

In licensing biological products we have a general procedure that we follow in obtaining the required information:

1. We have to have an application for license to the Secretary of Agriculture. This application must be signed by an authorized officer of the firm.
2. We need blueprints of the laboratories and plot plans of the premises showing the location of all the buildings. The blueprints must be complete to furnish the floor plans of all the rooms. Location of main production equipment, the products produced in each room, materials used in construction, plumbing, and drainage systems, etc.
3. We have to have outline of production. The outline must be a detailed procedure of production and testing. Depending upon the type of product involved, the outline must give complete information on such items as the source and strains of culture or virus used for production purposes, the composition of medias for propagating both seed and production cultures of virus, the firms method of handling seed materials and their methods of handling production cultures, time elements and degrees of temperature in the incubation of cultures, procedure and technique of harvesting materials used in the preparation of these products, methods of inactivating the organism in case of kill products or the methods of

modification or attenuation of virus for the live and modified live virus products, methods of preserving the products, a description of their procedure for batching, (they probably produce parts of a serial of product on different days; we want to know how they take one part and mix it with another); their method of filling final containers. In other words, we require that the product be thoroughly agitated in a common container before they start filling, and the product has to be constantly agitated during the bottling process. We want their complete protocol for testing and biological product along with the expiration date, dosage and recommendations.

4. Another requirement for licensing is sketches of labels and circulars. We do not review advertising material. We revise and approve the labels that are attached to the bottle and the circulars that are enclosed in the package.

5. Another requirement is the research conducted by the firm, citing of any published literature, all of which may be used to substantiate the safety and worth of the product. We require protocol and test charts covering the laboratory and field testing carried out by the firm in support of the license application. We need a report from our inspector in charge in the field covering his inspection of laboratory facilities, equipment, personnel and the like. We also require samples or organism used for the production of a product and samples of the finished product for examination and testing by the government. We hope we will have our laboratory in a few more years so that more extensive testing can be conducted.

Earlier, I mentioned that biological products other than hog cholera serum and hog cholera virus are a result of the research conducted by the individual firm. The Licensing Section does not prescribe methods of production. On occasion, we do suggest production methods for such products as brucella abortus vaccine and others which have been developed as a result of government research. For erysipelas vaccine we have a tentative outline of production. But in general, these products are usually produced according to the procedures of the individual firms. Production outlines do differ between commercial laboratories, however we do review these production procedures and they must conform to existing standards.

I will give you an example of how a biologic is produced, namely canine distemper vaccine, modified live virus, chick embryo origin. This vaccine is a suspension of chick embryo tissue infected with a modified strain of canine distemper. In this particular case, a distemper virus is modified on chick embryos. The virulent canine distemper virus can be isolated from field cases or it can be obtained from some other source, such as a university. The virus is injected into a dog and after the dog has sickened, the spleen, liver, blood, and other organs are harvested. A small amount, usually about one-tenth cc of about a ten percent suspension of the above infected organs is injected into eggs. A small hole is drilled over the air sac of the egg and this material is deposited on the chorio-allantoic membrane. After a few days of incubation, the eggs are cracked open and the infected chorio-allantoic membranes are harvested. A suspension of this infected membrane is then injected and passed through another series of eggs and

such passage is repeated 50, 60, 70 times and sometimes higher. The final material that is harvested after continued egg passage is injected back into dogs or into ferrets to see if the virus has lost any virulence. Ferrets are the most susceptible animals to distemper and if the virus isn't modified it will surely be brought out when these ferrets are injected.

This modified seed virus must be identified each time that production is started. A firm usually produces two, three, or four serials at a time, and then they will go out of production for a while. Each time a firm resumes production they must identify the seed virus again. The modified seed virus of canine distemper is usually identified by the ability to produce typical lesions on the chorio-allantoic membrane of inoculated embryonated eggs or by virus neutralization with known specific immune serum, or by injecting ferrets which must remain well and withstand challenge of virulent distemper virus. The seed virus must be bacteriologically sterile. This is determined by cultural examination. Then the sterile seed virus is inoculated into fertile eggs that are about six to eight days old. Again, the amount of inoculum is about one-tenth cc of a ten percent suspension. I said before, that eggs are inoculated over the chorio-allantoic membrane through a small hole that is drilled in the egg shell. The hole is then sealed with collodian. The eggs are incubated for six to eight days at 35° C. The virus grows and forms characteristic and visible lesions on the membrane, usually in the form of edema or other proliferative changes. The eggs are candled when they are removed from the incubator after six to eight days and only the live embryo showing lesions are harvested and used in the production of the vaccine. In harvesting, the egg shell is cracked and the membranes are removed. Usually, firms break the bottom part of the egg, let the entire embryo drop out and all that remains is the adhering CA membranes which are then removed with sterile forceps. These membranes are placed in a sterile receptacle surrounded by ice. It is very important that these tissues be kept chilled or in a frozen condition because if they are subjected to temperature changes some viable virus will be lost, consequently the product won't be as potent as one would expect it to be. The weight of harvested tissue is determined and recorded. The tissue is ground in a mill or blender. After the tissues have been finally ground into a smooth suspension, it is diluted to a forty or fifty percent suspension with some sort of stabilizing solution. I can't give you any information on these stabilizing solutions because of trade secrets of our licensed establishments. The purpose of stabilizing solutions is to prolong the life of the virus. In other words, after the vaccine is completed, bottled, and shipped by rail, air, or bus, and it remains on the shelves of the distributing agency, it is subjected to changes in temperature and other hazards which may be detrimental to the product. It might even be setting out in the sun during transit. The addition of stabilizing agents gives the virus a boost under these conditions. The material is usually centrifuged and filtered to remove coarse embryonic tissue. Antibiotics are used for a bacterio-static effect. Antibiotics usually do not kill, but retard the growth of bacteria. The product is thoroughly mixed in a common container and filled into sterile final containers. (Two cc of a forty to fifty percent suspension represents one dose of canine distemper vaccine). These vials of liquid vaccine are then quick-frozen. This is accomplished in several ways, by putting the vials in the deep freeze, or the vials of the vaccine are rolled across

rollers that are partly submerged in dry ice and alcohol. Usually by the time it goes across a series of rollers, the vaccine is well frozen. The frozen vaccine is then placed in desiccators such as the Stokes equipment. It usually takes about 24 to 30 hours to desiccate canine distemper vaccine. Other products may take a little longer and others may not take as long. Products are desiccated until the state where it contains less than three percent moisture. These vials are removed from the dryer and sealed under vacuum or oxygen free nitrogen. At this point, samples are collected for the government and for testing purposes. Canine distemper vaccine is tested according to minimum requirements. The animals used are either pups or ferrets. If pups are used they have to be litter mate pups and must be susceptible to distemper. Three or more pups or three or more ferrets are inoculated with the product; the vaccinees are then held for 14 days and then these vaccinees along with the controls of the same source - (two or more controls) are challenged with a virulent strain of distemper virus. The controls must succumb or show typical distemper infection, whereas all the vaccinees have to remain healthy for a period of 21 days. The product is checked for safety. The first part of the potency test prior to challenge serves as a safety test. The product is not supposed to bring ferrets or pups down with distemper. They are supposed to be perfectly healthy. Further, the product is injected into guinea pigs in the amount of two cc. These guinea pigs are held for a ten-day period of observation and they must show no significant effects referable to the vaccine. Then eight mice are injected intercranially with .03 cc of the reconstituted vaccine and seven of the eight must remain normal for 14 days. The expiration date for canine distemper vaccine is one year from the completion of the satisfactory potency test, provided it does not exceed 18 months from harvest.

There are other products produced very similarly to the procedure I just read. Bluetongue vaccine is produced in chick embryos and hog cholera vaccine is produced by the same principle except that rabbits or tissue culture are used instead of chick embryos. Cutter Laboratories is the only firm that produces tissue culture hog cholera vaccine at the present time.

Earlier I mentioned that data are usually submitted in support of a license application. I will try to give you an exact illustration of how a recent application for license was handled. This one was for rabies vaccine, modified live virus, chick embryo origin. This particular company tested their product according to the minimum requirements for potency and safety. Of course the minimum requirements involve the testing of the product in guinea pigs. It's a good test, but it isn't exactly what we wanted in support of a license application. We received their blueprints of facilities, their outline of production, labels, etc. But they only produced and tested one serial of vaccine. So bear with me and I'll read this letter and show you how we handled this application. This is the second paragraph of the letter.

"A preliminary review of the material at hand has been made and in general appears to be satisfactory for the purpose intended. Consideration of the license application will be withheld pending receipt of additional information in support of the license application. The Branch would be interested in receiving supportive data that the firm can routinely produce a stable product which will give protection in guinea pigs

and dogs against the disease. It is suggested that several more pilot batches be prepared and tested according to the procedures prescribed in the outline of production. Further, the product should be evaluated in dogs under laboratory conditions by challenging both vaccinees and controls with a virulent street rabies virus. Since the immunizing potential of the product will depend upon a living modified live virus, the firm should determine the amount of viable virus in its vaccine by employing virus titration techniques in mice. It appears that both the Branch and more so, the firm should be assured that the product is relatively stable. Unless the firm has a better method it is suggested that samples of vaccine be incubated for various periods of time such as 3, 5, 7, and 10 days. Virus titer determinations on the incubated samples should be conducted and compared to that obtained on fresh materials."

We know that rabies vaccine should have virus titer of about 10 - 3.5 or better, and if the virus titer drops appreciably below that, the product probably won't protect dogs when vaccinated in the field. We also know that vaccine subjected to incubation for 5 days at 37° C will drop one log in virus titer. Five days incubation is about equivalent to one year's storage of product under refrigeration temperature. Hence the reason for requesting additional stability data. A company should be able to produce a product that, when subjected to incubation for five days should not drop more than a log in virus titer. Then, "on receipt of the supporting data as requested above, further consideration will be given the material at hand." This company eventually received a license after they furnished us the information requested.

We have another area of work in biological products pertaining to the importation of organisms and vectors. We also have an area of work on the importation of biological products. The importation of biological products for sale in this country is like an application for license. In other words, if some foreign manufacturer wanted to distribute his products in this country we would ask him to meet the same requirements that our licensees do in this country. Incidentally, there haven't been any foreign products imported for sale in the United States within the last 15 years. The Branch wouldn't permit the importation of any live products of chick embryo origin because of the possibility of introducing Asiatic Newcastle disease in this country. We would not permit any live products of bovine or porcine origin because of the possibility of introducing "foot and mouth", rinderpest, contagious pleuro-pneumonia and other exotic diseases.

Now as to the organisms and vectors. We require that a permit be issued before anyone can import an organism or vector. The permit is issued by the Secretary of Agriculture.

In addition there are regulations on the interstate movement of certain organisms and vectors, including any of the vesicular viruses or other pathogenic agents which may be the causitive agent of some serious or very contagious disease in this country.



BIOLOGICAL PRODUCTS INSPECTION

by

Dr. Arthur L. Tellejohn

In the Biological Inspection, Dr. Hejl went into all the facets of licensing these biological products; we have about 118 licensed right now. In many instances, there is a similarity between these and others. They are just as individual as they can be. He explained the general way of making canine distemper vaccine. We have other vaccines that are entirely different.

To get back to the reason for inspection, you know about Meat Inspection's 50th Anniversary this year; we'll have one in seven years - 1963. Prior to 1913 when Doctors Dorset, McBride and Niles were working on a method of prevention of hog cholera, they developed a hog cholera serum and hog cholera virus. Since that time there were probably two or three hundred people who went into that business to make hog cholera serum. In trying to get the jump on the other fellow there were some pretty sharp practices that occurred. In some instances, they even bled calves in order to make hog cholera serum. In other instances, they used to get pigs (from the stockyards) that were sick with cholera, and put a little blood into a hog, string him up on a fence and bled him in a wash basin and then they would go see what their order book called for and if they only had 3,000 cc and they had orders for 5,000, they would just put in 2,000 cc of water, stir it up and sell it to them. There was no rhyme or reason to the way that serum was made, no inspection. So Congress passed the Virus-Serum-Toxin Act. At that time, I think it was aimed primarily at the hog cholera products because it was almost revolutionary in its method of manufacture and its treatment. Prior to that time, there were probably one-half dozen products licensed - mostly mixed bacterins and shotgun remedies. Then subsequent to 1913, they put in the present system that they now have for inspecting hog cholera serum and hog cholera virus. In this type of inspection you have one or more men located in each plant producing these products. These men carry the keys to the collar; they are in absolute charge of all phases of production. The animals for the production are selected by our personnel. All of them are purchased and handled by the firm. All of the products during the process of manufacture are locked up when our personnel are not there. Up until a year ago we had a veterinarian in every plant. I'm going to touch on the reason why we don't have them in a few minutes.

We also have one other type of inspection in which our people select samples of these biological products and submit those to the laboratory here, for inspection by us. The product is tested by the firm and is also tested by our people. Brucella abortus is a good example of that. Erysipelas vaccine is another one. All of our antigens that are used in the national program such as pullorum antigen and brucella antigen were tested and are still being tested here in Washington. I said that the erysipelas vaccine is tested here in Washington; it is

not. We have finally found someone to test it for us. It is being tested for us at the University of Nebraska under the direction of Dr. Olson.

In our routine testing of our hog cholera products, we test the hog cholera virus on other things such as pigeons or mice. We use two samples. One is the fresh sample that is not phenolized. That is injected into three mice or three pigeons and then three days later a phenotized sample is injected into either three mice or three pigeons. If any one of those pigeons dies, a reserve sample, which we have collected previously, is submitted to the University of Nebraska to determine if it is contaminated with swine erysipelas. If it is contaminated with swine erysipelas it is rejected and destroyed.

Then we have another type of inspection which you might say just grew like Topsey. It's kind of an intermittent inspection. Dr. Hejl was telling you about the outline that each firm is required to submit to us and is passed on by our Branch. That outline is used as a basis for the inspection. Usually, an Inspector in Charge is responsible for that type of inspection. You know how much time you have, with your regular office routine, to go someplace to make an inspection, so you can readily imagine what it's amounted to. But people are always amazed as to how much our inspectors do know, our Inspectors in Charge especially. We have had a very good working relationship with all of our licensees. It is not like in Meat Inspection, because I believe our relationship with the management is much closer. Now, in Meat Inspection, they work mostly with the personnel on the killing floors or in the units. We deal mostly with the heads of the departments, with top management that makes the policies for the firm; and we find that it works pretty good. Anytime they want to get in on a new product, which might be strange to the Inspector in Charge concerned, they usually tell him what they are doing. Every time the man makes a visit to these plants they are very informative, apparently very glad to have you come in.

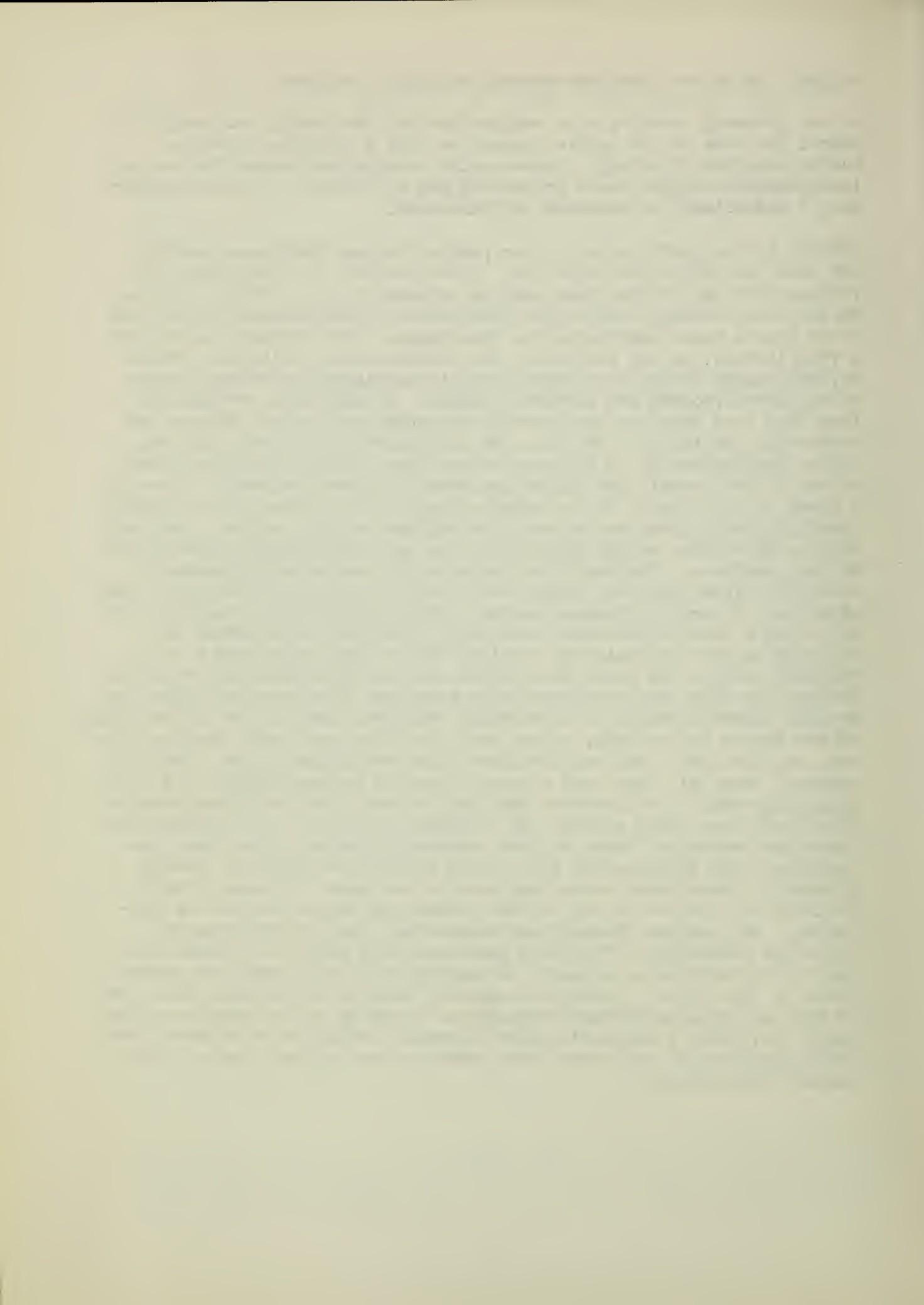
But as things change, we have to change our way of doing. Since it appears that we are going to get a laboratory, it will entail another change in our type of inspection. We have decided that some change must be made in our inspection procedure. We fully intend at all times to have at least one man at a serum plant. It is not because it is so complicated. There is always the threat of some outbreak of disease because of the large number of animals that they have to keep on hand at all times. As you all know, this last outbreak of VE was first found in one of our serum plants at Grand Island, and in talking to our men, we feel that another man missed it six months before that. We also know that if we do not have a man on the spot in serum production, the licensee, in order to avoid financial loss, will get rid of the animals as soon as possible. He can still stay within the regulations and get rid of the animals ahead of time. And so, if we don't have somebody to stop it, there is no telling just what might break loose.

So, we feel that it's very necessary and will be necessary in the future to have an inspector on duty at all times if they are working in a serum plant. Our people keep an inventory of their animals so that there can be no chance of switching them or moving them. All animals have to be

tagged. We do have absolute control on that, I believe.

We are presently working on a redirection and are sending our people to school the same as you people, except we have a technical school on bacteriology and virology. It was quite a refresher course that we had last year at Michigan State University and we are going to have another one, I understand, in September of this year.

This is to reacquaint a lot of our people who have had these courses, but some had them a long time ago. Modern methods of manufacture of vaccines are far removed from our old concept of serum, virus, and bacterins, and obviously our people would be at a disadvantage if they had to go into a plant and inspect on that basis. Our intention is to have a veterinarian, no lay inspector, all veterinarians, using the outline Dr. Hejl spoke about, as a basis to go in and inspect different steps of any given product and furnish a report. It will be a lot like the form that Food and Drug uses that goes around and inspects dairies and creameries and things like that. We don't have it in final form yet, but we should have it in the very near future. That is what we intend to use in the interim for inspecting these different products. There is a great deal of danger in the modified vaccine and there are constantly questions being given to us about the efficacy of the product. We feel that we don't know enough answers that we can intelligently answer some of the questions. Obviously the danger might come when propagating Newcastle Virus that they might have mixed up the strain identity. They might have a very irrelevant vaccine. They're supposed to test it, but we've had a case or two where they didn't test it. It got out; it happened to be a contaminated vaccine, but it could have been a very virulent vaccine and could have killed all the chickens they gave it to. Things like this, you people probably remember, four years ago when the anthrax bacterin seemed to have caused trouble. That is one of the things we are trying to get into, to see that the firms are really testing like they say they are. We feel that most firms are trying to do a good job because, after all they have a great financial responsibility, and if we picked up some of the products and they are not like their test reports show, they have quite a loss. Dr. Salsbury spent a million dollars two years ago because of three or four serials of product, which were contaminated with pullorum and also almost wrecked the pullorum testing program in those areas where that vaccine was used. We would like to redirect our inspection for another reason, to better utilize our personnel. Hog cholera products are decreasing; that is the serum and virus are decreasing. They have gone down from about two billion cc a year to 750 million cc a year. We anticipate it will level off pretty close to that point. It might eventually drop to 600 million, but a lot of the use of these products depends on the value of the animals on the farm. Obviously a man isn't going to spend 75 cents to vaccinate a two dollar pig, and we have found that economics are a great factor in hog cholera vaccination.



## SPECIAL DISEASE ACTIVITIES

by  
Dr. J. L. Hourigan

### Animal Morbidity Reporting

More than 35 years ago, the secretary of the United States Livestock Sanitary Association urged that national veterinary vital statistics be collected and distributed. The recommendation was based on the studied conclusion that such veterinary medical intelligence is essential in order to apply necessary disease control measures. The idea never lacked moral support, but for a long time it was without funds and a central agency to accomplish the task.

Animal morbidity and mortality reporting is not in itself a preventive against the inroads of animal diseases, but it is one of the important foundation stones in a sound structure of animal disease prevention, control, and eradication. The U. S. Livestock Sanitary Association, the American Veterinary Medical Association, and several other livestock industry groups have recognized the need for such a service and, for many years, have recommended the establishment of a complete reporting system.

As early as 1920, the U. S. Livestock Sanitary Association adopted a resolution recommending that livestock sanitary authorities in the States gather reliable information about the health of livestock and all outbreaks of communicable diseases and forward it to the U. S. Department of Agriculture for consolidation and publication.

Recommendations were made to correlate this information with the work of diagnostic laboratories throughout the United States. An extensive survey was conducted in 1947 by the Committee on Morbidity and Mortality on the needs for such information, the ways in which it might be gathered and distributed, and the Federal, State, and private agencies that might participate.

In 1949, the Committee again reviewed the situation, and recommendations were made and adopted by the association to assist the U. S. Bureau of Animal Industry in establishing a system for the collection and dissemination of statistics on livestock diseases, in cooperation with State livestock sanitary officials.

In November 1955, an Animal Disease Reporting System was established in the Agricultural Research Service. The Special Diseases Eradication Section of the Animal Disease Eradication Division has the responsibility for the collection and correlation of all animal disease morbidity and mortality information available to the ARS; to establish means for collecting the information from other agencies of the Federal Government and the States; and to disseminate it in systematic reports designed to be of maximum assistance to the livestock and related industries, practicing veterinarians, and agencies of the State and Federal Government concerned with the prevention, treatment, control, or eradication of animal diseases.

Starting with the month of January 1956, monthly Animal Morbidity Reports have been prepared, and about 1,000 copies distributed each month to State veterinarians, ADE Division stations, State health officials, deans of veterinary schools, associations, libraries, publications, etc., and within the Department's Washington offices. Foreign distribution includes Argentina, British Honduras, Canada, Denmark, England, Japan, Mexico, Switzerland, Union of South Africa, and the West Indies.

For the first few months, the report included only the morbidity status of brucellosis, tuberculosis, paratuberculosis, scabies, vesicular exanthema, anthrax, equine encephalomyelitis, scrapie, dourine, glanders, and bluetongue. Starting with the June 1956 report, the format of the report was revised. A more attractive arrangement was designed, a better species breakdown was developed, and rabies and hog cholera were added to the list of diseases covered.

In addition to statistical information, material of general interest has been included. To this end the following reports have been added to the Animal Morbidity Report: "Outbreak of Virulent Newcastle Disease"; "Outbreak of Aujeszky's (Pseudorabies) Disease in Cattle"; "An Example of Diseases Encountered at Public Stockyards"; "Recent Outbreaks of Psoroptic Scabies in Wyoming"; "Psoroptic Scabies Mites Recovered From a Horse in Colorado"; "Tuberculosis in a Horse"; "Psoroptic Cattle Scabies Diagnosed at Public Stockyards"; "Recent Developments and a Brief History of Cattle Fever Tick Eradication Activities"; etc. Visual aids recently released have also been featured.

In addition to monthly reports, the following annual reports are prepared and distributed: "Annual Report of Cooperative State-Federal Sheep and Cattle Scabies Eradication"; "Reported Incidence of Rabies in the United States"; "Reported Incidence of Infectious Equine Encephalomyelitis and Related Encephalitides in the United States"; "The Incidence of Bluetongue as Reported in the United States"; and special Animal Morbidity Reports.

A more comprehensive system was developed to summarize the incidence of animal diseases as revealed by the cooperative animal disease reports from various States and from other available information.

Among other reports and activities, the Section compiled and issued "A Summary of the Status of the Various Animal Disease Reporting Systems in the United States."

Similar reports will be prepared in the future. Preliminary discussions with members of the Public Stockyards Inspection Section, the Poultry Diseases Section, and Program Services Section suggest that reporting procedures to include disease reports from public stockyards and diagnostic laboratories can be worked out.

## Bluetongue

### Nature of Disease

Bluetongue is an acute, infectious disease of sheep and, to a much lesser degree, of cattle. It is characterized by a rise in temperature, lameness, hemorrhagic inflammation of the mucous membranes of the mouth, edematous swelling of the head parts, and a cyanotic discoloration of the tongue. The disease is caused by a filterable virus and spread by an insect vector.

A tentative diagnosis of bluetongue should be based on symptoms, lesions, history and spread. Bluetongue is a seasonal disease which usually appears rather suddenly in midsummer and fall, followed by a rather rapid buildup, and disappears when the frosts of winter cause the vector to become inactive. The disease does not spread in the absence of the vector. In warm climates the vector (Culicoides Variipennis) may be active throughout the year and clinical cases of bluetongue may be seen the year round.

The inoculation of susceptible sheep with blood collected from animals in the early stages of the disease (preferably those with high temperatures) is the most satisfactory means of confirming a clinical diagnosis of bluetongue. At present there are no other dependable means of diagnosis; however, a serological test is being perfected.

Bluetongue must be differentiated from certain stages of other diseases including photosensitization, contagious ecthyma, "stiff-lamb disease," pneumonia, Rift Valley fever, founder, and foot-and-mouth disease.

### Economic Importance

Bluetongue is becoming an increasingly serious problem in the United States. Morbidity in affected flocks varies widely--being anywhere from 2 to 50 percent--and may approach 100 percent. Many of the cases may be subclinical. The mortality is also quite variable--being between 1 and 30 percent of the diseased animals. In some flocks the mortality is much higher, and in Africa is often from 40 to 90 percent. Losses aside from mortality include loss of flesh and weight, damage to wool clip, and interference with reproduction, with flock management programs, and with the marketing and movement of animals.

### History

Bluetongue was originally reported in the Union of South Africa where it was identified as a filterable virus disease in 1905 and has occurred there and caused serious losses since the latter part of the 19th century. The disease has been studied extensively in the Union of South Africa, at Onderstepoort, and these studies have provided virtually all the fundamental information about it. Bluetongue has occurred in Southwest and East Africa, in Northern and Southern Rhodesia, as far north as French Sudan to the west and Abyssinia to the east, and has also been mentioned in reports from Cyprus, Israel, Turkey, Palestine, Syria, Portugal, and Spain.

The disease has probably been present in the United States for a number of years, but received first mention in Texas in 1948 under the name of "soremuzzle." Since then the clinical diagnosis of bluetongue in California, Arizona, Utah, Colorado, New Mexico, Texas, Oklahoma, Missouri, Kansas, Nebraska, and Oregon has been confirmed by laboratory studies and cases of the disease in other States have been suspected.

#### Current Program

The Department of Agriculture has cooperated with biological houses, State officials, sheep owners and others in the diagnosis of bluetongue and in the production, testing and field use of a vaccine for its prevention. The vaccine became available for field use in 1954. It has been widely used since that time.

When bluetongue is suspected the proper officials should be notified. Veterinarians should be prepared to collect blood samples from suspect sheep and cattle for forwarding to the ADP Laboratory in Denver, Colorado, for inoculation into test sheep.

Good nursing and symptomatic treatment is recommended. Since heat and sun-light aggravate the condition, infected animals should be kept cool and in the shade. Infected animals should not be handled roughly or driven, particularly on hot days.

Control procedures include vaccination against bluetongue in areas where the disease is endemic and protection against the insect vector.

Although the literature contains references to the occurrence of clinical bluetongue in cattle, the disease has not been diagnosed in this species in the United States.

#### Visual Aids

Film, "Bluetongue, Catarrhal Fever of Sheep."

Kit of 25 bluetongue slides.

#### Dourine Eradication

##### Nature of Disease

Dourine is a usually chronic, communicable disease of horses and asses caused by Trypanosoma equiperdum, a protozoan of microscopic size. The disease is characterized first by a local inflammation of the external genital organs, and later by a cutaneous eruption and symptoms of nerve paralysis.

None of the symptoms described is pathognomonic for dourine when taken individually, but collectively they are quite helpful in reaching a diagnosis.

Dourine was first diagnosed by means of history and clinical symptoms, later augmented by microscopic demonstration of the trypanosome, morphological examination of the blood, agglutination, precipitation reaction, fixation of lipoids, agglomeration, allergic methods, and by experimental inoculation.

In 1912 the complement-fixation test was made applicable to the diagnosis of dourine and has been the method of choice for many years in the United States and in other countries. This test gives a specific group reaction for the genus Trypanosoma.

In tropical regions differential diagnosis of dourine from nagana, surra, and mal de caderas may be difficult. In regions where these disease do not exist, the initial stage of dourine may be mistaken for traumatic inflammation of the genitals, for injury during coitus, for cases of glanders and purpura hemorrhagica when these diseases involve swelling of the lower abdomen, and from lumbar, facial, or other types of paralysis not of dourine origin.

#### Economic Importance

A mortality of 50 to 70 percent has been reported in animals affected. Losses, aside from mortality, include loss of flesh, interference with breeding and herd management programs, and difficulty with the movement of equines due to the necessary quarantine restrictions.

#### History

Dourine was first described by Ammon from his experience in Prussia in 1796-1799. The nature of the etiological factor was indicated by Rouget in 1894. Until the middle of the last century dourine was widely distributed throughout Europe. More recently it has been indigenous only in certain southern and eastern countries of Europe, but is more common in other continents. The disease has appeared in North and South Africa, Asia, Asia Minor, Syria, India, Java, Australia, South America, and North America. The spread of dourine has been enhanced by the extensive movement of equines such as takes place during time of war, etc.

In Canada, dourine appeared in 1904 and was eradicated in 1920. In Mexico, dourine is widely spread, and along the Mexico-United States border has been and continues to be a very serious threat to susceptible animals in this country.

In the United States, dourine was first recognized in Illinois in 1886, after being introduced by an imported French stallion. The disease was brought under control after being detected at irregular intervals in Nebraska and South Dakota. In 1906 a new center of infection developed in Iowa and was not curbed until 1911.

By means of the complement-fixation test positive dourine reactors have been found over a large area including Arizona, California, Colorado, Idaho, Iowa, Montana, Nebraska, Nevada, New Mexico, North Dakota, Oregon, South Dakota, Virginia, and Wyoming.

Dourine has been eradicated from this country; however, reactors are found from time to time in areas bordering the Republic of Mexico—particularly among horses on Indian reservations in those areas.

#### Current Program

Federal-State cooperative eradication includes inspection, collection of blood samples, testing of such samples with the complement-fixation test, and destruction of all animals positive to the test. An occasional animal may apparently recover, but it remains a potential spreader. Spaying reactor mares and castrating reactor stallions is only a temporizing method of control.

When dourine is suspected the proper officials should be notified immediately. Veterinarians should be prepared to obtain blood samples from suspicious equines so that serum samples can be sent to the laboratory for diagnosis by the complement-fixation test.

### Cattle Tick Fever

#### Nature of Disease

Cattle tick fever (also called bovine piroplasmosis, Texas fever, and splenetic fever) is a specific infectious disease of cattle caused by a microparasite (*Babesia bigemina*) and is transmitted by ticks (*Boophilus annulatus* and *B. microplus*) from infected to susceptible animals. The former ticks infest horses as well as cattle and the latter may, in addition, be carried by sheep and goats.

The acute disease is characterized by a rise in temperature to 106° to 107° F., inappetence, and marked depression. Anemia develops as red blood cells are destroyed, and mucous membranes become pale and often icteric. Hemoglobinuria is frequent. Severe acute cases lead rapidly to prostration and death in 5 to 8 days after onset. Mortality may approach 90 percent in susceptible animals. Diagnosis is confirmed by the demonstration of *B. bigemina* in stained blood smears.

Mild cases show gradual recovery over weeks or months. Chronic cases occur with periodic febrile attacks, anemia, diminution of appetite and emaciation with relatively low mortality. Cattle native to enzootic areas may develop mild, immunizing attacks as calves, while introduced cattle show heavy losses.

#### Economic Importance

Cattle affected with tick fever become anemic, lose weight, give less milk, and many (particularly those not previously exposed to the disease) die. Hides are damaged by the ticks and quarantine restrictions increase the cost of shipping animals. This disease caused estimated losses of \$40,000,000 annually in the United States before it was eradicated. This estimate is based on cattle prices considerably under present prices and during a period

when the number of cattle was less than now. If tick vigilance were not maintained, the disease would quickly spread into this country, resulting in losses considerably in excess of those previously experienced.

#### History

Cattle tick fever is indigenous in the tropical and subtropical regions of the world. The disease probably spread into the southern part of the United States from the West Indies and Mexico, apparently as early as 1796.

The nature of the disease was not understood until 1889, when scientists of the United States Department of Agriculture discovered that the causative agent was a protozoan transmitted by the cattle tick, Boophilus annulatus. This discovery furnished the first experimental proof that disease can be borne by anthropods and is regarded as one of the great achievements of medical research. The ticks transmit the protozoa to their progeny transovarially.

The first step to control the vector, B. annulatus, was to determine the northern boundary line of the infested area. The first quarantine order was issued July 3, 1889. When it became general knowledge that this tick was the intermediate but essential factor in transmission and perpetuation of this disease, its eradication was advocated. In 1906 the first Congressional appropriation was made for this purpose and an extensive eradication program was begun. The vector was eradicated from the United States by 1943, except for a narrow buffer zone in southern Texas along the border between the United States and Mexico. Reinfestation occurs there frequently because the adjacent area of Mexico is badly infested.

On April 23, 1957, cattle-fever ticks (B. microplus) were found at a live-stock market at Okeechobee, Florida, by a State inspector.

Since the last reinfestation in Florida (eradicated in 1950), cattle passing through all auctions throughout the State have been inspected routinely for ticks by experienced inspectors, and all cattle except those selling for slaughter have also been dipped. It was as a result of this routine search for fever ticks that the ticks were found. Steps were taken immediately to treat the infested and exposed herds and place a State quarantine on the area likely to be affected. Action was also taken to trace movements of animals to and from the area during the last two or three years, to place the premises involved under State quarantine, and to investigate the possible source of the ticks. In all, more than 100 ranches in 10 Florida counties have been placed under quarantine.

Experienced State and Federal tick inspectors have been assigned to the eradication project and more than 30 employees are now engaged in eradicating the infestation. To date, cattle on a total of four adjoining premises in Okeechobee County, one premises in Dade County, and one premises in Broward County have been found infested. The Florida Livestock Board has quarantined all of Okeechobee County, part of Dade County, and part of Broward County. The quarantines will be extended, if necessary.

Florida was the last State (with the exception of Texas where a narrow buffer zone along the international border is still infested) to be freed of fever

ticks. The last Federal quarantine in Collier and Hendry Counties in the Big Cypress Swamp area was lifted in December 1943.

All territory in Mexico adjacent to the international boundary between Texas and Mexico along the lower Rio Grande River is tick infested, and reinfestations in Texas by ticks carried by Mexican animals illegally entering the United States occur frequently. The river, serving as the boundary, is not an effective barrier against such illegal movements. A buffer area, under Federal and State quarantine, extends from Del Rio to the Gulf of Mexico, approximately 500 miles. This zone is constantly patrolled by Department inspectors who, in cooperation with Texas livestock sanitary authorities, work diligently to reduce the introduction and prevent the dissemination of the ticks. The area under quarantine includes parts of Cameron, Hidalgo, Kinney, Maverick, Starr, Val Verde, Webb, and Zapata Counties.

The fever tick was eradicated from California many years ago. However, this State also has a common border with infested areas in Mexico, and animals illegally entering the United States reintroduce ticks from time to time.

In Puerto Rico an active tick eradication program, which has been under way for a number of years, is nearing completion. Here the tropical variety of the fever tick was prevalent, and it was necessary to treat sheep and goats as well as equines and cattle.

#### Current Program

The cooperative eradication program, which includes inspection, quarantine, and dipping, is now confined to Florida, the buffer area in Texas, and to Puerto Rico.

In considering measures for eradicating the tick, it is evident that the pest may be attacked in two locations--in the pasture and on the host. Animals may be freed of ticks in two ways: (1) With a tickicide that destroys all the ticks, or (2) they may be pastured at proper intervals on tick-free fields until all the ticks have dropped. Dipping is the method generally used. The pasture-rotation method is more complicated and tick-free fields are seldom available.

In freeing pastures, the method followed may be either direct or indirect: (1) The direct method consists in excluding all hosts of the vector from the pasture until all the ticks have died of starvation. (2) The indirect plan consists in permitting the cattle and other animals to remain on the infested pasture and treating them at regular intervals with agents destructive to ticks, thus preventing engorged females from dropping and reinfesting the pasture. All the seed ticks on the pasture, or those that hatch from eggs laid by females already there, will die eventually. Those that get on the hosts will be destroyed by the treatment, while those that fail to find a host will starve.

In the United States the only approved procedure for treating animals to destroy the cattle-fever tick is by dipping them at 14-day intervals in an arsenical solution containing 0.22 percent of arsenious oxide. The strength of the dipping solution is determined by a chemical test before each use.

Veterinarians and inspectors should be alert for ticks of Boophilus spp. not only on animals in areas along the border between the United States and Mexico, but also on routine inspections at concentration points, prior to issuing health certificates, etc. When it is suspected that such ticks may be present, the proper officials should be notified immediately, and specimens should be collected for laboratory identification.

#### Visual Aids

Film, "The Threat of the Cattle Fever Tick."

Afford opportunity to observe preserved specimens of cattle-fever ticks, if possible.

### Scabies Eradication

#### Nature of Disease

Scabies is a contagious skin disease of animals caused by minute, parasitic mites, hardly visible to the unaided eye, living on or in the skin. It spreads very rapidly, is characterized by inflammation, exudation and thickening of the skin, and results in intense itching, loss of wool or hair, and emaciation. Most domestic animals are susceptible. Of principle interest to agriculture are sheep and cattle.

Scabies is not difficult to diagnose--the veterinarian has only to demonstrate and identify the causative mite. Veterinarians and inspectors should be prepared to take skin scraping in case a suspicious skin condition is encountered and should have a hand lens available for studying external parasites. Recognizing the disease is more difficult in recently infected animals and during periods when the mites are less active, particularly during warm weather.

Scabies usually follows a customary pattern of spread. It is comparatively easy to eradicate with the dips available to us, providing all animals in infected and exposed herds and flocks are properly dipped.

Scabies is spread through changes of ownership which result in the introduction of infected animals into herds or flocks; through market centers, sales rings, livestock shows, stockyards, etc., and is kept in existence by undetected and untreated reservoirs of infection.

#### Economic Importance

Cattle and sheep cannot be raised profitably when affected by scabies. Great monetary losses are suffered in decreased meat and wool production, arrested development of young animals, poor physical condition of affected animals predisposing them to other diseases, and damage to hides. Quarantine restrictions increase the cost of shipping and add to the losses suffered by the industry. Unless properly treated, affected animals may die. The disease in the past has caused tremendous losses in this country.

## History

Scabies has been known from the earliest times and is mentioned in Arabian medicine and in the Old Testament.

Psoroptic scabies has probably been a problem in the United States since the first sheep and cattle were introduced into this country, and has been very wide spread from time to time. Efforts to eradicate the disease were begun more than 50 years ago. A Department of Agriculture bulletin on sheep scabies published in 1898 contained excellent illustrations of scabby sheep, the causative mites, and equipment needed for treating ovines by dipping. At the turn of this century Federal quarantines were placed upon the western half of the United States. An active eradication program was developed and gradual progress was made in the western range areas. The Federal quarantine was removed from counties and States as the disease was eradicated.

However, reinfestation of sheep and cattle in range areas was not uncommon and it was not until some 20 years ago that the eradication program in the West neared completion. As the disease became less common in these areas more attention was directed toward its eradication in the Midwest and East.

The Psoroptic Sheep Scabies Eradication Program was implemented a few years ago in Louisiana and in Mississippi, particularly in certain parishes and counties that had been under Federal quarantine since 1918 and 1927. This all-out drive has been quite successful and has eliminated one of the important reservoirs of infection. The Federal quarantine in both Louisiana and Mississippi was lifted July 1, 1957.

Unfortunately the general outlook in other States, particularly those of the midwestern farm areas, is not nearly so good. The disease has probably been present in the majority of the problem States almost continuously since before 1900. Active eradication programs have been followed from time to time in a number of those States but, for the most part, have afforded only temporary relief.

A comparison of the annual report for 1956 with that for 1955 indicates there was an increase of 37 percent in the number of infected flocks reported and an increase of 22 percent in the number of counties involved. The report of 607 infected flocks in 267 different counties (an average of approximately 2.3 infected flocks per county) suggests that the disease is rather wide spread in certain areas. In addition to the information included in this report, psoroptic sheep scabies was diagnosed in 110 consignments of sheep received at public stockyards under supervision of the Animal Disease Eradication Division.

Following the eradication of psoroptic cattle scabies from the western range areas the disease has been only infrequently seen. The first major outbreak in recent years was reported in the winter of 1953-1954. A number of infected herds were found in southeastern Colorado. From there the disease spread to Arizona, California, Oklahoma, Texas, and Missouri. The disease also was reported in Wisconsin.

During the following winter psoroptic scabies was found at the Chicago Union Stockyards in Colorado cattle. Infected herds also were found in Colorado, Kansas, Texas, Nebraska, and Kentucky. During fiscal year 1956, infected herds were again found in Colorado, as well as in Kansas, Texas, New Mexico and Iowa. During fiscal year 1957 infected animals were found in Colorado, Wyoming and Ohio, and in cattle from Kansas at the Chicago Union Stockyards, and at the St. Joseph Stockyards, and at Denver, Colorado, in a bull from Iowa.

A Federal quarantine, as well as a State quarantine, is in effect in Colorado covering Crowley County, and parts of Las Animas, Otero, Pueblo, Bent, and Prowers Counties.

#### Current Program

The Federal-State cooperative program provides for inspection of sheep and cattle for scabies and for treatment of infected and exposed animals. Quarantines are imposed as required.

Experience has shown that both Federal and State authority are needed for satisfactory control, whether the proposed movement of animals is intended to be interstate or intrastate. In some cases, State quarantines alone have been unable to control the spread of scabies. On the other hand, Federal authority is incomplete within the State.

Animals affected with scabies are diseased and are prohibited by Federal regulations and law from moving interstate. Each State also has regulations concerning the handling of infected animals and movements from affected herds and flocks.

Veterinarians and inspectors should be alert for the symptoms and lesions of the disease not only in suspicious herds and flocks but also on routine inspections at concentration points, prior to issuing health certificates, etc.

It is very important to determine the origin of infection and to locate animals moved from infected and exposed herds and flocks in order to treat all reservoirs of infection and thus carry out the goal of the Scabies Eradication Program, which is to completely eradicate the disease from the United States.

As an important aid in the training of personnel, arrangements made with the Animal Disease and Parasite Research Division have enabled us to provide on-the-spot training at Albuquerque, New Mexico, to over 70 State and Federal employees.

#### Visual Aids

Film, "Psoroptic Sheep and Cattle Scabies."

Kit of 45 scabies slides.

## Scrapie Eradication

### Nature of Disease

Scrapie is a chronic infectious disease of sheep and goats characterized by an unusually long period of incubation, up to three years or more. Symptoms include intense pruritus (the itching and rubbing causing wool to be scraped off), progressive locomotor incoordination, weakness, paralysis, and death.

Diagnosis of scrapie is based on clinical symptoms and laboratory findings. Brain tissue from the diseased animal is examined microscopically for the presence of vacuoles within the nerve cells. The suspicious animal should not be slaughtered until the case is advanced sufficiently so that a satisfactory specimen of brain tissue can be obtained for laboratory examination. Brain tissue for histologic studies should be placed in 10 percent formalin and should not be frozen. The disease should be differentiated from listeriosis, Aujeszky's disease, rabies, pregnancy toxemia, and scabies.

Scrapie is believed to be caused by a filterable agent of unusual properties. Like some viruses, the agent survives for an extended period (at least two years) when held at temperatures far below zero. It differs from ordinary viruses in that it can survive hours of boiling and is resistant to disinfectants that destroy them.

Muscular degeneration, similar to muscular dystrophy in man, has been described by two British medical doctors and a veterinarian as a possible explanation of the symptoms seen in scrapie rather than involvement of the nervous system. We are making a most meticulous examination of scrapie-infected sheep in an effort to determine if there is any basis for this theory.

Another theory is that the disease may be hereditary and that undue stress may cause symptoms to develop.

British workers have injected material from sheep infected with scrapie into other sheep and have transmitted the disease through 16 serial passages. They have also transmitted the disease from sheep to goats and back to sheep, and from artificially infected goats to other goats. French workers have also transmitted scrapie to sheep and to goats by injecting brain and spinal cord tissue from scrapie-infected sheep, and in both countries experimental evidence has shown that the disease can be spread by contact.

Efforts to develop a diagnostic test or a vaccine have not been successful and no effective treatment has been found.

### Economic Importance

Sheep showing symptoms of scrapie invariably die. The disease has been, in this country, more prevalent in valuable breeding animals of imported stock. Due to the extensive interstate commerce in such animals and the rapid manner in which they are distributed over large areas, the problem

is serious. Since the disease seldom affects sheep under 18 months of age, it would be expected to be a less serious problem among feeder lambs (except for those born weak or orphaned because their dams were affected by the disease). The purebred sheep industry suffers very serious loss when valuable bloodlines are destroyed and because quarantine restrictions must be placed on its flocks. It has been quite difficult to estimate the morbidity of scrapie even in countries where the disease is common. Owners tend to be secretive and many deny that their flocks are affected with the disease. It is particularly urgent that every effort be made to eradicate scrapie before losses pyramid here as they have in countries where the disease has been widely disseminated.

#### History

Although scrapie has been known in Europe for over 200 years, it was not until 1947 that the disease was diagnosed in this country--the first cases being reported in Michigan in a flock that consisted largely of imported sheep or their progeny. Scrapie had been reported previously in Canada in 1939, in Suffolk sheep imported from Scotland. Sheep of the Cheviot and Hampshire breeds also have been found to be infected in Canada. Other countries in which scrapie has been reported include France, Germany, Poland, Austria, Hungary, Australia, and New Zealand. Australia and New Zealand acquired the disease through the importation of Suffolk sheep from Great Britain. Both countries believe they have eradicated scrapie by following a slaughter program similar to the present program in this country. They have also--as has Canada--prohibited further importation of British sheep in order to prevent the reintroduction of the disease.

In the United States scrapie has been diagnosed in a total of 60 flocks in 51 counties in 18 States. These include Michigan, Connecticut, Texas, Georgia, Iowa, Missouri, Virginia, Wisconsin, and Utah, with one infected flock each; New York, Oregon, Tennessee, North Carolina, and Alabama, with two infected flocks each; Illinois with five flocks; California with six; Ohio with nine; and last--and with the most--Indiana with a total of 21 infected flocks. Two of the 60 flocks have been of the Cheviot breed, the remainder have been Suffolks. No breeds of sheep are considered to be immune to scrapie. In France (where British breeds are not common) the Disease is not confined to any particular breeds.

#### Current Eradication Program

The present State-Federal cooperative program, which provides for inspection, diagnosis and quarantine, and for slaughter of infected and exposed sheep and goats, was developed through review of information from Europe, consultation with European and Canadian officials, and through meetings with research workers, livestock sanitary officials, and members of the sheep industry of this country.

The eradication program places emphasis on infected flocks, which are slaughtered in their entirety. Exposed sheep moved from the infected flock (and their immediate progeny) are also slaughtered. The flocks in which these animals are, or have been, located are inspected for a period of 42 months following destruction of the exposed animals. Flocks which have

been determined to be the origin of infection are handled in the same manner as infected flocks.

The Federal Government may indemnify owners for animals destroyed because of scrapie a maximum of \$25 each for grade animals and \$75 each for pure-bred animals. This amount is based on 50 percent of the difference between appraisal and salvage and may be paid whether or not the State also pays indemnity.

Scrapie is a particularly difficult disease to handle. Its onset is insidious. The early symptoms are difficult to detect and the affected animal may actually appear to have recovered, only later (perhaps after several months) to begin to show the more obvious symptoms. Early symptoms include nervousness, apprehension and increased excitability; the head and ears may be carried in unnatural positions, and there may be a loss in condition in spite of a good appetite. As the disease progresses, the animal rubs against fixed objects and may nibble at itself and pull wool. When the affected animal rubs or is being rubbed, the scratch reflex, characterized by extension of the head accompanied by nibbling movements of the lips and vigorous wagging of the tail, usually is evident. Later symptoms include debility, incoordination and finally death.

There is no denying that scrapie appears more frequently in certain breeds and in certain bloodlines within these breeds. However, this is difficult to evaluate since particular bloodlines have become very popular in recent years and breeders naturally seek those that are currently in demand.

It is apparent that scrapie is a disease that is spread by the movement of sheep from certain flocks that have become reservoirs of infection, rather than spreading readily to adjacent farms as do such diseases as contagious ecthyma and scabies. This is brought out by the fact that the 60 scrapie-infected flocks in this country have been found in 51 counties in 18 different States. The Pavy flock in Indiana, for example, is believed to have been responsible for spreading the disease into 9 flocks in Indiana, 2 flocks in Alabama, 2 flocks in North Carolina, and 1 flock in Missouri. There would probably have been many more infected flocks if we had not slaughtered the Pavy flock and the exposed sheep sold from it. Other reservoirs include the McIntyre flock in Indiana, the Broadmead Farms flock in Oregon, and the T. L. Patrick and F. J. Rock flocks in Canada. Infected animals were never observed in the Broadmead Farms flock but, inasmuch as sheep from this flock developed scrapie in 2 flocks in Oregon and 3 flocks in California, it was determined that the Broadmead Farms flock was disseminating the disease and, for this reason, it was treated as an infected flock and slaughtered.

#### Research

Research on scrapie is time consuming and costly. It requires time to span the long incubation period, large numbers of animals to get the required number of "takes," space in which to maintain and segregate flocks used in experimentation, and personnel to care for such animals and to do the necessary technical work. Research is not being carried on in France at this time, but the subject is very much alive in Canada and in Great Britain. Nö

research projects are under way in the United States; however, we are entering into a cooperative research project with the British.

#### Visual Aids

Film, "Scrapie, an Obscure Disease of Sheep."

Slides, "Vaculation of neurons of sheep affected with scrapie."

THE GENERAL RESPONSIBILITIES OF THE SPECIAL DISEASES ERADICATION SECTION ARE AS FOLLOWS:

1. PLANNING. Participates in the planning and development of disease control and eradication and allied programs of the Division.
2. PROGRAM DEVELOPMENT. Develops and recommends cooperative programs of inspection, quarantine, testing, diagnosis, disinfection, condemnation and disposal designed to control and eradicate cattle-fever ticks, scabies, bluetongue, scrapie, and other livestock diseases not assigned to other Sections of the Division.
3. ANIMAL AND POULTRY DISEASE INFORMATION. Collects and correlates animal and poultry disease morbidity and mortality information available to the Agricultural Research Service, including that available through other Federal and State agencies. Disseminates such information in systematic reports designed to be of maximum assistance to livestock and related industries, practicing veterinarians, and Federal and State agencies concerned with the prevention, treatment, control, or eradication of animal and poultry diseases.
4. AUTHORITIES AND PROCEDURES. Develops and recommends policies, plans, regulations and procedures required for the administration of assigned functions and responsibilities.
5. COOPERATIVE AGREEMENTS. Originates and reviews proposals relating to and develops and recommends the undertaking or modification of co-operative agreements and similar authorizations providing for Federal-State cooperation in the conduct of special diseases control and eradication and animal quarantine measures.
6. TECHNICAL ASSISTANCE. Provides technical advice and assistance to officials of the various States in the planning and development of requirements and measures best suited to the conduct of assigned cooperative disease control and eradication programs in their respective States.
7. REGULATORY MEASURES. Collaborates with representatives of the various States in formulating regulations and procedures for controlling the movement of livestock to prevent the spread of cattle-fever ticks, scabies, bluetongue, scrapie and miscellaneous other livestock diseases.
8. LIAISON. Maintains liaison with other Federal and State agencies and public and private organizations and associations on matters relating to functions of the Section.
9. FIELD COORDINATION AND DIRECTION. Develops procedures for exercising technical direction over and coordinating field activities of the Section.



## INTERSTATE REGULATIONS ENFORCEMENT SECTION

by  
Dr. J. J. Martin

The Interstate Regulations Enforcement Section of the ADE Division is concerned with violations of two different types of laws. One group is composed of the Animal Quarantine Laws of 1884, 1903, and 1905 (A.Q. Laws). The other law is the so-called 28-Hour Law (Humane Act), enacted June 29, 1906, the purpose of which is to prevent the over-confinement of animals in interstate commerce in cars, boats, or vessels beyond the statutory period without being unloaded in a humane manner into properly equipped pens for feed, water, and rest.

A violation of the Animal Quarantine Laws is a criminal offense while a violation of the 28-Hour Law is a civil offense. In the first instance, it is necessary for the Government to prove beyond a reasonable doubt that the crime was committed by the defendant. In the second instance, it is necessary for the Government to prove by a preponderance of evidence that the violation was committed by the carrier. In most cases the railroad records constitute this evidence.

Prior to the establishment of the Bureau of Animal Industry in 1884 the problem of eradicating infectious livestock diseases was one for the State or States involved to cope with individually. As those of you know who have read the history of the era, it was an almost insurmountable task for a State that apparently had eradicated an infectious disease to keep from becoming reinfected by animals from neighboring States. In addition, there was always the question as to whether a specific infectious disease actually existed in a given State because livestock officials were hesitant to acknowledge the existence of an infectious disease for fear of an embargo or other reprisal. Also, some States were not in a position, from a financial standpoint, to stand the expense of eradicating an infectious disease that had become widespread. It was largely these circumstances, as well as embargoes against American livestock by foreign countries, that brought about the establishment of the Bureau of Animal Industry by the Act of May 29, 1884.

Among other things, this Act provided for the Commissioner of Agriculture:

1 - To make regulations necessary for the suppression and extirpation of contagious, infectious, and communicable diseases of livestock.

2 - To expend Federal funds for investigation, disinfection, and quarantine measures in cooperation with States in the extirpation of infectious diseases. This was later extended to include expenditures of Federal funds for eradication and payment of indemnities when a cooperative agreement was entered into between the Department of Agriculture and a properly constituted State authority.

3 - To make investigations as to the existence of such livestock diseases.

4 - To notify in writing transportation companies and publish in newspapers notice of the existence of contagious, infectious, or communicable diseases.

The Act prohibits the interstate movement of animals known to be affected with a contagious, infectious, or communicable disease, when it states "that no railroad company. . . shall receive for transportation or transport. . . nor shall any person. . . deliver for such transportation. . . nor shall any person drive on foot or transport in private conveyance any livestock, knowing them to be affected with any contagious, infectious, or communicable disease. . ." The Office of the General Counsel (Department of Agriculture) has made it clear to us that for a "knowing" violation it is not necessary to show that the shipper and/or carrier had knowledge of the law or regulations involved, but only that he knew or should have known that the animal in the shipment was affected with an infectious disease and that it was transported interstate. Neither is it necessary to prove that the violation was willfully committed.

This Act also directs the United States Attorneys to prosecute all violations which are brought to their attention. (A violation of the 1884 Act is a misdemeanor punishable by a fine of not less than \$100 nor more than \$5000, or by imprisonment for not more than one year, or by both such fine and imprisonment.)

The Act of 1903 was necessary because the Department was faced with an emergency. Supreme Court decisions pointed out the fact the Secretary was exercising authority he actually did not have. The Act of 1884 directed the Commissioner of Agriculture to make special investigations as to the existence of infectious diseases, along the dividing lines between the United States and foreign countries, and along the lines of transportation in the United States and report his findings to the Secretary of the Treasury, who was directed to establish such regulations concerning the exportation and transportation of livestock as the results of such investigations might require. The Act of 1903 corrected this by giving this authority to the Secretary of Agriculture and specifically provided for Federal inspectors to inspect livestock and issue certificates for their interstate movement. Also, it gave the Secretary of Agriculture authority to make regulations . . . to prevent the introduction or dissemination of any contagious, infectious, or communicable disease of animals from a foreign country into the United States or from one State . . . to another, and to seize, quarantine, and dispose of any hay, straw, forage, or similar material, or any meats, hides, or any other animal product coming from an infected foreign country to the United States. (Violation of the 1903 Act is a misdemeanor punishable by a fine of not less than \$100 nor more than \$1000, or by imprisonment not more than one year, or by both such fine and imprisonment.)

The Act of 1905 empowered the Secretary of Agriculture to establish and maintain quarantine districts and to promulgate regulations permitting and regulating movement of cattle and other livestock interstate therefrom. The establishment of a Federal quarantine to prevent the spread of a communicable livestock disease from one State to another is a

drastic measure that is usually invoked only as a last resort. The procedure generally followed when a serious livestock disease is diagnosed is for the State involved to immediately establish a quarantine, thereby stopping the movement of diseased and exposed animals within the State, and then proceed to eradicate the disease. If, however, it has become widespread, or there is an undue delay in disposing of the affected animals, then a Federal quarantine is resorted to in order to prevent the interstate movement of any animals from the quarantine area. If the disease continues to spread it may become necessary to extend the Federal quarantine to the whole State. In this connection the Secretary of Agriculture has authority to cooperate with the State concerned in drastic eradication measures, including the purchase of diseased or exposed animals and contaminated materials. (Violation of the 1905 Act is a misdemeanor punishable by a fine of not less than \$100 nor more than \$1000, or by imprisonment not more than one year, or by both such fine and imprisonment.)

Because of the prohibition against the interstate movement of diseased livestock in the basic Act of 1884, it was necessary in 1920 to ask Congress to pass a special law permitting the interstate movement of cattle reacting to the tuberculin test. (At that time the large number of reactors made it difficult to dispose of them within the State where found. In addition, the salvage price was being continually lowered.) Under this new authority the Secretary of Agriculture prescribed rules and regulations for the interstate movement of reactors, which require that they be tagged, branded, and accompanied by a certificate, and shipped to public stockyards or slaughtering establishments operating under Federal inspection.

On February 2, 1928, Congress amended the basic Acts by directing that wherever the term livestock is used it shall be followed by the words "and/or live poultry." This brought live poultry under the same laws as livestock.

In 1951 it was necessary to ask Congress for authority to permit the interstate movement of animals which have reacted to a test for para-tuberculosis or brucellosis. This was granted and the Department issued regulations governing these types of reactors similar to the regulations governing the interstate movement of cattle reacting to the tuberculin test.

As the brucellosis eradication program progressed and States and Counties became certified, the need for a general brucellosis regulation was apparent. After much discussion and consideration of many comments and suggestions a brucellosis regulation became effective January 1, 1957. Under this regulation there is the prohibition against the interstate movement of cattle with certain exception:

1 - The only change in the handling of reactors is that they may now be moved interstate to specifically approved stockyards and specifically approved slaughtering establishments. Previously such reactors could go only to establishments operating under Federal meat inspection or public stockyards where Federal inspection is maintained.

2 - One of the exceptions to the new brucellosis regulation is that

steers, spayed heifers, and calves under eight months of age may be moved interstate without restriction under this regulation.

3 - Cattle may be moved for immediate slaughter to public stockyards, specifically approved stockyards, Federally inspected slaughtering establishments, or specifically approved slaughtering establishments, provided they are accompanied by a waybill or owner or shipper's statement, as outlined in the regulation.

4 - Cattle may be moved to public stockyards or specifically approved stockyards for sale if accompanied by a waybill or a statement of owner or shipper, as outlined in the regulation; provided, however, that movement of such cattle to another destination must comply with the provisions of this part, the same as if the cattle had been originally consigned direct from point of origin to such destination.

5 - Cattle other than those mentioned may be moved into areas not certified as modified brucellosis free or into modified certified brucellosis free areas, provided they are accompanied by a certificate issued by a Federal or State inspector, or an accredited veterinarian, as outlined in the regulations.

This is a brief summary of the new brucellosis regulation. The Animal Quarantine Laws of 1884, 1903, and 1905 are found in the back of B. A. I. Order 309, and are the basis for our present Federal interstate regulations.

The intrastate movement of livestock is, of course, controlled by State laws and regulations. Practically all States have health requirements governing the admission of animals from other States as well as the movement of livestock within the State. (Circular I - U. S. Livestock Sanitary Association.)

For some years suggestions have been offered by different interested organizations and individuals, proposing some degree of uniformity of requirements for the admission of livestock into the several States. While such a plan placed in operation would avoid the confusion now prevailing when consignors undertake to move livestock interstate, regional differences seem to provide some justification for the variety of requirements among the individual States. As for an example, an importing State would have cause to set up more stringent regulations than an exporting one.

Since 1940 the Council of State Governments has made efforts to coordinate the regulations of the several States with a view to uniformity. The Committee on Laws and Regulations of the United States Livestock Sanitary Association in its Proceedings of 1944 presented the basis for more uniform requirements governing the interstate movement of livestock and also included a suggested, or model, form. At this meeting arguments were offered by representatives of breed associations, State sanitary officials, and livestock associations, each of which tended to support uniformity of regulations. Two States followed without material alteration the code proposed by the Livestock Sanitary Association, evidently regarding the restrictions imposed on livestock offered for entry as adequate. Other States have set up requirements similar or with modifications. A few States have imposed even more rigid requirements than those outlined in the model code.

Traffic and movement tend to increase the probability of disease transmission. This situation, together with the importance of the livestock industry to our economic welfare, led to recognition of the fact that adequate regulatory measures must be employed to limit or control the spread of disease. Experience has shown that both Federal and State authority are needed for adequate control, whether the proposed movement of livestock be intended for interstate, intrastate, or foreign shipment.

States alone have been unable to control livestock diseases in some cases. On the other hand, the Federal power is incomplete within the State. As the State's authority is absolute in the event of intrastate movement, it also follows that the Federal authority applies when interstate movements are made.

In spite of the contagious nature of the various disease of animals and of the volume and traffic of the industry, it is recognized that the several State regulatory agencies, in cooperation with the Federal, have served to make the United States outstanding in the field of animal disease eradication and control.

As has been previously pointed out, one purpose of the Animal Quarantine Laws and the regulations implementing these statutes is to prevent the interstate movement of diseased animals. The enforcement of these regulations has an important bearing on the welfare of the livestock industry throughout the country for their interests would be seriously impaired if the work was not energetically prosecuted. It is not implied that the State requiring health or test certificates as a condition of entry is free of such disease, but that the authorities intend to prevent the accumulation of more infected animals within the State. Such restrictive measures are to be regarded as well founded precautions. Protective measures have been designed to prevent the entry of diseased or exposed livestock, and not for the purpose of setting up economic barriers.

All reports of violations of the Federal regulations in the interstate movement of diseased animals are fully investigated. The lack of prompt and vigorous action could very well lead to the disregard of all Federal Animal Quarantine Laws and seriously undermine the whole disease eradication program in the United States. State livestock sanitary officials consistently urge that Federal prosecution be instituted to protect the industry from unscrupulous dealers who traffic in diseased animals.

Our usual procedure is to have field employees who investigate the alleged violations forward their reports, through the inspector in charge, to the Washington office, where the evidence is reviewed and recommendation for prosecution is made when the facts appear to warrant such action. If there are some extenuating circumstances, or sufficient evidence cannot be furnished, then such cases are filed without further action. Where additional information is needed, investigators are instructed in detail as to the type of affidavit and other pertinent information required. Most of these violations involve the interstate movement of animals affected with a communicable disease, such as hog cholera, vesicular exanthema, sheep and cattle scabies; illegal interstate movement from a quarantined area; interstate movement of reactor animals which have not been tagged, branded, and accompanied by a proper certificate; and failure to disinfect vehicles

which have contained diseased animals. If after being reviewed in the ADE Division, it is determined there is substantial evidence of a violation, then it is forwarded to the Office of the General Counsel for consideration. If that office concurs in our decision, the appropriate documents are prepared and the case is forwarded to the Department of Justice where it is again reviewed before being sent to the United States Attorney to institute prosecution proceedings. In some instances the General Counsel, Department of Justice, or the United States Attorney may request additional information or ask for clarification on some point before taking further action. When we are finally notified that the case is considered satisfactory and forwarded for prosecution, we advise our inspector in charge to render all possible assistance to the United States Attorney.

## 28-HOUR LAW ENFORCEMENT

by  
Dr. J. J. Martin

The first 28-Hour Law was enacted on March 3, 1873, and a somewhat stronger law, still in force, was enacted June 29, 1906. This law requires that animals in interstate commerce by rail or water be unloaded at stated intervals for feed, water, and rest.

A problem arose with the use of railways for transporting livestock to market when crude equipment and methods of handling stock in transit resulted in inhumane practices in losses through shrinkage, injury, etc. This condition evoked many protests and resulted in the enactment of the first 28-Hour Law on March 3, 1873. However, the Department had neither means nor authority to enforce its provisions until the Bureau of Animal Industry was established 11 years later. The present law was enacted June 29, 1906. It provides that livestock in interstate transportation by rail or water shall be unloaded in a humane manner at stated intervals into properly equipped pens for rest, water, and feeding, or under certain conditions they may be fed and watered in the car.

The purpose of the 28-Hour Law is to prevent the over-confinement of animals shipped in interstate commerce by common carrier. Waybills and records maintained by carriers and others are daily examined and apparent violations reported at stations where Federal livestock inspectors are stationed. Inspections are also made from time to time at approximately 900 feed, water, and rest stations in 48 States to ascertain if the facilities and equipment are maintained for the safe and humane handling of the species of animals for which they were designed to accommodate. When unsatisfactory conditions are found at these stations they are promptly brought to the attention of the responsible railroad by the Animal Disease Eradication Division inspector in charge for corrective action. In addition, the railroad records are checked and all cases of over-confinement beyond the statutory limit are reported to the Office of the General Counsel for prosecution.

Due to the lack of authority to promulgate regulations it is necessary to base our recommendations for prosecution of violations of the 28-Hour Law on court decisions. Through the years practically every phase of the 28-Hour Law has been contested by carriers and court decisions rendered. These decisions have been annotated in book form and are used by the Washington Office as a guide for evaluating apparent violations. It appears from the language of the law that it is not applicable to trucks.

The lack of authority to make regulations to enforce the 28-Hour Law also made it necessary for the Department to determine the amount of feed that should be given to livestock and the amount of time to be allowed when animals are fed, watered, and rested in cars without unloading. While the law requires that animals be unloaded into properly equipped pens for rest, water, and feeding for a period of at least

five consecutive hours, there is also a provision that they need not be unloaded if they can and do have proper feed, water, and space, and opportunity to rest in the car. Following conferences with carriers, owners, and shippers of livestock, operators of slaughtering establishments, and others, the Secretary of Agriculture issued what is known as a Statement of Policy governing the feeding, watering, and resting of livestock in transit, and this sets forth the minimum requirements which would be accepted by this Department as complying with the Act.

The Department is without authority to extend the statutory period of confinement; however, several courts of appeals have held, in effect, that where a terminal or switching road moves livestock with diligence and dispatch from its interchange with a trunk line carrier to a place where the animals can be unloaded (reasonably nearby), it does not violate the 28-Hour Law even though the statutory period has been exceeded before the shipment is received, or expires while the cars are in its hands.

In order to avoid the necessity for determining in every case whether the livestock has been moved with diligence and dispatch, the Department has entered into agreements with switching roads at a number of the larger terminals setting forth the time considered reasonable for the movement between the point of interchange and the point where the animals were to be unloaded. These allowances have been made only on the request of the terminal or switching road concerned, and not at the solicitation of a trunk line carrier or for its benefit.

While the 28-Hour Law was enacted primarily for humane reasons, to reduce to a minimum the cruelty incident to the transportation of livestock, it also protects the interests of owners of animals and of the public, by safeguarding the health and condition of the animals and by preventing their serious injury while in transit. To have his stock reach the market in as nearly the same condition as when it leaves the farm or the ranch is the object of every stockman and shipper. This can be accomplished only by giving the animals while in the course of transportation as nearly as possible the care, attention, feed, water, and rest to which they have been accustomed. If animals are confined in cars for an excessive period without feed, water, or rest, or if unloaded within the statutory time for the stipulated 5-hour period but into a pen too small for them to rest or even move about, or too muddy to lie down, or if the proper kind and amount of feed and water are not supplied, or if in the unloading or reloading process the animals are handled in an inhumane manner, the objective desired by the shippers and contemplated by the statute is not attained. The livestock as the result of such treatment arrive at destination in a feverish condition and the quality of the meat may be affected if the animals are slaughtered while in that state.

How well the 28-Hour Law is being enforced may be judged from the fact that whereas formerly it was not uncommon for carriers to confine animals in cars for periods of 50 to 60 hours or even more, now the carriers, as a whole, are endeavoring to unload them within the statutory period and to give them proper care and treatment when unloaded.

## BRUCELLOSIS CONTROL AND ERADICATION

By C. K. Mingle <sup>1/</sup>

It is a pleasure for me to meet with you and discuss the brucellosis program. I am sure that most of you are quite familiar with the general aspects of brucellosis control and eradication. However, I believe it would be in order to briefly review the progress being made in our control and eradication efforts, and to point out some of the problems with which we are still concerned.

### Brucella Abortus Infection

Although the first confirmed evidence of bovine brucellosis in the United States dates back to 1910, it was not until 1934 that organized efforts were undertaken to control and eradicate this disease. Of the 3.3 million cattle tested during the first year of this program, 11.5 per cent were classed as reactors. This compares with a maximum of around 5 per cent animal infection for the country as a whole in the case of bovine tuberculosis.

For the past several years, brucellosis in cattle has been recognized as one of the most serious and widespread infectious diseases occurring among livestock in this country. While the disease is most prevalent in the predominantly dairy sections, it exists from coast to coast and from border to border. Even though the incidence of brucellosis in strictly range cattle is comparatively low, the infection frequently assumes serious proportions in feed lots.

### Brucella Suis Infection

Brucellosis was first identified in the United States as an infection of swine in December, 1914. However, there is reason to believe that Brucella suis was present in this country long before that date. Inasmuch as no nation-wide program for the eradication of this disease has yet been put into operation, the true incidence of brucellosis in swine cannot be accurately determined. Limited records available on individual herd testing conducted in the Middle West have indicated an animal infection rate of between 3 and 5 per cent for that area. While the serious nature of swine brucellosis is well recognized by farmers, veterinarians, and public health officials in those sections that are affected, it is less important to the country as a whole than bovine brucellosis. It is entirely possible, of course, that with the advancement of the eradication program in cattle, a similar project may be required eventually for swine.

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### Brucella Melitensis Infection

The initial identification of caprine brucellosis in the United States was made in 1911 in the state of Texas. As in the case of swine brucellosis, information on the extent of Brucella infection in goats is inadequate at the present time. As might be expected, this disease appears to be confined largely in the South-Western States where most of the goat population is found. Based upon the results of scattered testing conducted in various sections of the country, it would appear that the incidence of Brucella melitensis infection in goats does not exceed 2 per cent.

### Bovine Brucellosis Control and Eradication Procedures

#### Test and Elimination of Reactors

The nation-wide campaign to eradicate brucellosis from cattle was inaugurated in the summer of 1934. In the beginning, this program was developed as a co-operative State-Federal undertaking in which eradication was based entirely upon the elimination of reactors to the blood serum agglutination test. At that time, there was considerable hope that this disease might be combated in the same manner as bovine tuberculosis, and with equal success.

Although a great deal was accomplished during the early years of the project by the test-and-slaughter method, it soon became apparent that complete eradication by this procedure alone would be very difficult to accomplish on a nation-wide scale. Increasing evidence was developed to show that, because of inherent differences in the epizootiology of bovine brucellosis and tuberculosis, each would require somewhat different methods for control and eradication. Regardless of the procedures employed, it has been repeatedly demonstrated that the progress made in various areas of the country is far more closely related to the thoroughness with which procedures have been applied than with actual methods themselves.

In other words, while there is a need for employing available methods under conditions best suited to their usefulness, it is likewise important that they be applied in a thorough and aggressive manner.

Variations in the types of herds affected with brucellosis, differences in the character of the disease as it affects various herds, and the degree and length of time infection has been present are important factors to be considered in the selection and application of appropriate means of control. The complex nature of this disease cannot be ignored if maximum results from any plan are to be achieved. The value of test and slaughter has been convincingly demonstrated when used under suitable conditions. However, one of the greatest dangers connected with such a program is the matter of replacements. Herds in which heavy losses have been sustained through rigid testing programs must depend largely upon outside sources for the animals necessary to maintain commercially active enterprises. The owners of such herds are

extremely vulnerable from at least two directions. First, they face the danger of introducing infection through newly purchased stock. Secondly, the introduction of known healthy animals from herds that have been free of the disease for several years provides fertile ground for perpetuating any residual infection that might remain on the premises. The susceptibility of such animals to brucellosis is usually quite high. In spite of a great deal of confusion and many false starts, approximately 33 million cattle were tested during the first five years of the program and the percentage of reactors was reduced from 11.5 in 1935 to 2.5 in 1940. During this period much was learned about the value and limitations of the test-and-slaughter method of eradication. It soon became evident, for example, that the results obtained by the elimination of reactor animals depend largely upon the stage of infection existing in a given herd at the time eradication efforts are undertaken. In cases where the disease has been introduced recently and is accompanied by frequent abortions, there is far less chance of immediate success than is possible with herds that have passed through these violent early stages of infection. Therefore, the most favorable time to eradicate brucellosis appears to be after clinical manifestations have subsided. This, of course, is impossible in program operations and adds to the problems of combating the disease by the elimination of reacting cattle.

#### Vaccination

Based upon the results of extensive laboratory and field investigations Strain 19 vaccine was approved in 1914 for use in the co-operative State-Federal brucellosis eradication program. Previous experiences with test and elimination of reactors already has emphasized the need for an immunological agent and the advent of Strain 19 was generally welcomed throughout the country. In fact, during the first few years after it became available, vaccination was employed more widely and indiscriminately than was justified. This was especially true with respect to its use in the vaccination of adult animals. The persistent vaccinal reactions resulting from over-age vaccinations have been a continuing source of confusion in herds where eradication measures, based upon the removal of reactors to the blood agglutination test, have been put into operation.

As might be expected, vaccination has been extremely popular in many sections of the country and each year since it became a part of the official program there has been a marked increase in its use. For the five-year period extending from 1941 through 1945, approximately two million calves were vaccinated officially. With vaccine available through commercial channels, there was probably at least an equal number of vaccinations performed outside the co-operative program during the same period.

As the use of vaccine increased, growing evidence was provided from the field that there were definite limitations to the protection afforded by vaccination with Strain 19. The immunity established through use of this product is relative and not absolute. This fact

has been overlooked too often and explains some of the disastrous results that have been associated occasionally with vaccination. There is no question, of course, about the value of Strain 19 vaccine when it is used under conditions that assure maximum benefits. The importance of limiting exposures of vaccinated animals, through the adoption of approved animal husbandry and sanitary practices, has been proved in hundreds of cases.

#### Brucellosis Ring Testing

As a result of earlier studies carried out in Europe on the "AER" test, co-operative investigations of this procedure were undertaken in the fall of 1947 at the University of Minnesota. Based upon consistently favorable reports covering the experimental use of the ring test, it was included, in 1952, as part of the procedures approved for use in the official brucellosis eradication program. Since its adoption, the ring test has proved extremely valuable, especially in predominantly dairy areas of the country. Through its use, large numbers of dairy-type herds can be screened rapidly and economically for presumptive evidence of Brucella infection. This makes possible a concentration of eradication efforts on herds that are probably infected. Where moderate to low degrees of infection exist, counties can be ring tested at approximately 10 per cent of the cost of blood testing the same areas. Both milk and cream samples can be examined by this method. Because it is not effective for diagnosing individual animal infection, suspected herds must be routinely blood tested. In so far as its efficiency is concerned, it has been found that the ring test locates around 90 per cent of the herds in which one or more Brucella-infected animals are in production. On the average, follow-up blood tests on ring-reacting herds are in agreement in 70 per cent of the cases. Approximately 70 per cent of failures to agree are due to infected animals being out of production at the time ring tests are made. There seems to be a psychological aspect associated with milk and cream testing that encourages livestock owners to become actively interested in eradicating brucellosis from their herds. This, together with other factors relating to the usefulness of the test, has resulted in its rapidly increasing use since 1952.

#### Uniform Methods and Rules

Progress in the bovine brucellosis eradication efforts during the years before 1947 was handicapped by a lack of uniformity of operations in different parts of the country.

Instead of following a similar eradication pattern, the states insisted upon developing their own programs. Obviously, this lack of a uniform approach held little prospect for the eventual eradication of brucellosis. In order to correct this situation, the Bureau of Animal Industry took steps to encourage the establishment of uniform control and eradication practices. Sufficient interest was stimulated through discussions with interested groups throughout the country to result in the preparation and adoption of uniform bovine brucellosis eradication

procedures at the December, 1947, meeting of the United States Livestock Sanitary Association. With minor amendments added during subsequent years, this outline has continued to serve as an effective instrument in promoting the eradication project throughout the country. These recommendations are an integral part of the State-Federal memoranda of understanding relative to the co-operative brucellosis eradication project.

The design of these recommendations was predicated on the importance of providing reasonable flexibility for handling the brucellosis problem under varying herd conditions. Essentially they consist of four separate plans which may be reviewed briefly as follows:

Plan A--Test-and-slaughter, with or without calf vaccination

This plan has eradication as its immediate goal and is the method of choice where the incidence of infection is low and herds are self-contained. It has been highly successful in herds of this type when related recommendations have been closely followed. About seven out of ten infected herds can be freed of brucellosis by two tests. Three herds in ten require three or more tests to accomplish the same results. Difficulties with this procedure are most frequently encountered in highly susceptible herds where virulent infection is spreading rapidly.

Plan B--Test, calf vaccination, temporary retention of reactors

As the title indicates, this plan is designed to enable the owners of heavily infected herds to work out of a difficult brucellosis situation in a gradual manner, thereby avoiding serious economic shock. It permits reactors to be held in quarantined herds for periods not to exceed three years. Under normal conditions, this provides time to raise enough resistant heifers on the premises to allow replacement of the adult infected animals. Plan B has been widely used throughout the country and for the most part has worked effectively as a stepping stone towards Plan A and eventual eradication.

Plan C--Calf vaccination without test of any part of the herd

This procedure was developed primarily to encourage the range cattle industry to recognize the brucellosis problem and to participate more actively in the program. It has been difficult to interest the range people in brucellosis eradication and Plan C was adopted as a means of bringing them into the program with the hope that they would eventually move towards more effective operations. Plan C is confined to herds where the movement of animals is allowed only through special permits issued by State livestock sanitary officials.

Plan D--Adult vaccination

Plan D was included in the procedures to counteract unofficial vaccination of adult cattle. Under present conditions, there is every reason to discourage this practice and fortunately it has declined steadily during the past few years. In the presence of so-called "infection storms," a condition usually existing in herds where vaccination is

requested, most of the susceptible animals already are exposed before any value can be realized from the use of vaccine. Consequently, any benefits that may seem to be provided by adult vaccination are more imagined than real. Plan D required the testing of entire herds, with vaccination of adults confined to non-reactor cattle that have been tested within the previous ten days. This plan is available for use only in emergencies where there is evidence of rapidly spreading infection and then only with written approval of the co-operating State-Federal agencies.

#### Brucellosis Eradication Procedures for Swine and Goats

At the present time no nation-wide programs have been developed for the eradication of brucellosis from swine and goats. However, we may be approaching the point where such projects are essential. This is especially true with regard to swine brucellosis, which constitutes a recognized threat both economically and from the standpoint of public health.

Sufficient data have been assembled on brucellosis in swine during the past few years to permit the development of suggested methods for the control and eradication of this disease. The results of field trials, based upon testing and segregation of weanling pigs, have been encouraging and suggest the possibility that practical methods for economically elimination *Brucella suis* infection from swine are now available. Although the blood-serum agglutination test does not possess the same accuracy in swine as in cattle, it has proved effective for diagnosing herd infections.

As already pointed out, *Brucella melitensis* infection in goats does not occur extensively in the United States and, consequently, no concerted effort has been made to eradicate the disease. However, from the results obtained by the removal of reactors to the blood-serum agglutination test in individual herds throughout the country, it seems reasonable to believe that this procedure can be effectively employed as an eradication tool. It has been found that goats reacting in titres as low as 1:25 must be considered if test and elimination of reactors is to be successful in known-infected herds.

#### Bovine Brucellosis Eradication Progress

During the first 15 years of the co-operative eradication program, progress was erratic, even though the overall picture continued to show general improvement. For many years the project was hindered by lack of unified effort. However, great improvement was noted following the adoption of uniform control and eradication practices. Further difficulties arose during World War II as the result of acute shortages of trained veterinary personnel available for field operations. From July, 1934, to April 30, 1957, a total of nearly 14 million herds representing approximately 172 million cattle, were tested for brucellosis. Over the same period, the indicated animal infection dropped

from 11.5 per cent to 1.61 per cent. As mentioned before, the eradication picture has changed rather markedly at various times, concurrently with alterations in the level of field activities. During the first seven years of the program when yearly testing volumes remained high, there was a decline each year in the percentage of reactors disclosed. With personnel problems developing in 1942, testing began to drop off and the percentage of reactors started to rise, reaching a secondary peak of 5 per cent in 1947. From this point on, there has again been a consistent reduction in animal infection rates.

Over the past few years, greatly increased interest in brucellosis eradication has been displayed by various groups, including the livestock industry, the veterinary profession, livestock sanitary officials, and the general public. This interest has been reflected in the volume of official work performed. For the 10-month period ending April 30, 1957, more than 13 million cattle were tested for brucellosis. This compares favorably with the number tested during the same period in fiscal year 1956. For 16-year period (1941-56) a total of 30.5 million calves were officially vaccinated with Strain 19. Since its approval in 1941, the use of Strain 19 has increased each year, reaching an all-time high of nearly five million calves vaccinated in 1956.

While it is impossible to accurately assess the value derived from vaccination over the past several years, there is reason to believe it has played an important role in the eradication project. As programs based upon test and elimination of reactors move into areas where widespread vaccination has been conducted, the incidence of infection disclosed has been surprisingly low in many instances. Moreover, it has been encouraging to note a gradually changing attitude on the part of livestock owners with respect to the role calf vaccination should play in the eradication plan. Rather than accepting this procedure as a means of control alone, there is increasing interest in utilizing vaccination as a move toward eventual eradication. In many sections of the country where vaccine has been extensively used, we are seeing a significant up-swing in the volume of blood testing. There is no question about the advantages of vaccination when it is employed as an adjunct to test and elimination of reactors.

So far, seven of the 48 states have qualified as Modified-Certified Brucellosis-free Areas. This designation certifies that the herd and animal infection disclosed in these states by testing does not exceed 5 per cent respectively. A number of other states are rapidly approaching this same status and should be eligible for certification within the near future.

Owing to extensive movements of livestock, the maintenance of certified areas has constituted a rather serious problem. Previous experience with recertification at three-year intervals has shown that a significant increase of infection may be found in many such areas over this period of time. With the advent of the milk and cream ring test, this difficulty

has been largely overcome in dairy sections of the country. By conducting semi-annual ring tests at milk and cream collection stations, it is possible to detect most centers of infection early enough to limit spread of the disease. From the standpoint of its economy of operation and its ability to detect brucellosis on a herd-infection basis, the ring test has fulfilled most earlier expectations. This test offers a means of employing qualified lay technicians for the collection of milk and cream samples, thereby permitting the concentration of veterinary services on herds presumed to be infected. Since it became a part of the official program in 1952, approximately 1.5 million herds, representing an estimated 113 million cattle, have been ring tested throughout the country.

#### Brucellosis Test Data on Swine and Goats

The increasing recognition that must be given to inter-species transmission of Brucella types has made it essential that consideration be given to all susceptible livestock groups. With this in mind, we have been tabulating results obtained from tests made on swine and goats in the various States. To date, these records have been collected over a period of more than five years and represent a total of 474,397 swine and 304,182 goats tested for brucellosis. Of the swine tested, 5.2 per cent were classed either as reactors or suspects. In the case of goats, 1.8 per cent were similarly identified. All States have been surveyed with respect to the swine brucellosis problem. In brief, the following information was obtained:

1- Seventeen States now have provisions for certifying swine herds as brucellosis-free.

2- As of December 31, 1956, there were 371 qualified brucellosis-free swine herds in 15 states.

3- Eighteen States reported current interest in swine brucellosis ranging from moderate to very high. The majority of these States expressed the belief that commercial as well as purebred herds should be included in any eradication effort undertaken.

With no organized program available for the eradication of brucellosis from these species, the number of tests being conducted at owners' requests continues to be surprisingly high. And the results of this study reflects growing concern about the brucellosis situation on the part of many swine and goat raisers.

#### Expansion of the Eovine Brucellosis Eradication Program

The Congress of the United States has made available additional funds for use in accelerating the brucellosis eradication project during fiscal years 1955-1958. This action could not have been taken at a more appropriate time, as current interest in eradicating the disease was never greater. As might be expected, immediate expansion of these operations has been greatest in the States where local programs were best organized. However, it has been possible to accelerate the program in most sections of the country far more rapidly than expected. The fact

that the expanded program called for the restoration of former maximum indemnity payments of 25 dollars for grade animals and 50 dollars for pure-breds to owners of cattle destroyed because of brucellosis has been an important factor in this regard. Furthermore, under present operating procedures, States with co-operative agreements are no longer required to match Federal indemnity payments. Fortunately for the expanded program, two years of research was completed in time to throw new light on the interpretation of reactions in officially calf-vaccinated animals. These studies, conducted in field-vaccinated herds in different parts of the country, were designed to correlate blood-serum agglutination titres in official vaccinees and non-vaccinees with results of bacteriological examinations.

Briefly, these investigations showed that, in the case of calf-vaccinated cattle, the diagnostic level used for interpreting blood-serum agglutination reactions could be safely raised one full dilution over that employed for routine diagnosis of brucellosis in unvaccinated animals. Thus, with the alternate interpretation, officially calf-vaccinated animals are not considered infected unless they react to the agglutination test in titres of 1:200 or higher. This compares with reactions in the 1:100 or higher dilutions that are still considered diagnostically positive for non-vaccinees. The new interpretation for vaccinees has been accepted and incorporated into the official recommendations for bovine brucellosis eradication procedures.

At the inception of the expanded program, it was realized that the personnel requirements for the various states would have to be met through the employment of practicing veterinarians. This being the case, a system was developed to pay co-operating veterinarians on a per-head or per-herd-and-per-head basis, on schedules approved by the Agricultural Research Service and the individual states. Participation of the veterinary profession in the new program has been reasonably good. Approximately 7,000 are now signed up for service and many are actively engaged in various aspects of the program.

#### Discussion

- 1- The present decline in blood testing operations points up the need for expanding the informational program in those States where progress is delayed. It should be pointed out that with only an estimated 45.9 per cent of the cattle population now under supervision, the potential in this regard is still quite large.
- 2- The momentum generated in program operations during the past two years is a valuable asset that can be used to advantage. Experience has shown that ground may be rapidly lost when pressures are relaxed. On the other hand, an expanding program tends to attract even wider participation.
- 3- There are five important factors with which the success or failure of the brucellosis eradication campaign is intimately related. These are (a) attitude of the livestock industry, (b) available funds, (c) manpower, (d) necessity for complete area work, and (e) danger of complacency in certified areas.

- a. There are still sections of the country where more effort needs to be made along informational lines. Whenever the industry is fully informed about the program, its support is always forth-coming.
- b. The increased financial assistance being given the brucellosis project by the States can be accepted as a sign of the times. There appears to be a growing realization that the more support everyone provides, the sooner brucellosis and its associated losses will be eliminated. This trend needs to be encouraged in every way possible.
- c. Although the participation of nearly 7,000 practicing veterinarians has contributed materially to the eradication effort, there are still areas in which service requirements of the program are not being met. This is especially true in those sections of the country where few, if any veterinarians are located. It also occurs to a lesser extent in certain other areas as a result of practitioners being slow to carry out their assigned responsibilities.
- d. We are rapidly approaching the time when all brucellosis eradication work should be conducted on a complete area basis. Without the protection afforded by this type of operation, progress is delayed and difficult to maintain. Every encouragement possible needs to be given complete area work.
- e. Complacency in certified areas is to be avoided at all costs. There is danger that efforts will be relaxed in qualified counties and States to the extent that infection rates are allowed to increase. The ultimate goal of complete eradication must be emphasized continuously.
- f. The accelerated brucellosis eradication program has demonstrated conclusively and effectiveness of available tools and procedures when aggressively and properly applied. There is no question about our ability to achieve nationwide certification within the near future and eventual complete eradication of this disease if we so desire.

## LABORATORY SERVICES OF THE ADE AND AIQ DIVISIONS

by  
Dr. J. E. Williams

In 1884 the former Bureau of Animal Industry consisted of a staff of four persons, namely, Dr. D. E. Salmon, Chief; Dr. Theobald Smith, a young scientist in his twenties who was preparing to do battle with Tick Fever; Mr. Kilborne, Bachelor of Agriculture; and Alexander, an ex-slave, who "sat about solemnly, and when urged, got up to wash the dirty bottles or chaperon the guinea pigs." From this beginning the BAI grew into an organization with a broad field of responsibility in research, diagnosis, and eradication of diseases occurring in all types of domestic animals. From the very beginning when Theobald Smith set out to hunt microbes in a little room in the attic of a government building, the importance and need of laboratory services to augment disease control and eradication activities has been recognized. You, who are engaged in disease control and eradication activities in the field are most cognizant of all of the importance of laboratory services to your everyday activities. Correct diagnosis and the supplemental information provided by the laboratory study of disease conditions are the most important factors in formulating successful programs for effective disease control.

As a result of reorganization in the Agricultural Research Service, research activities relating to animal diseases are now administered under the Animal Disease and Parasite Research Division. Diagnostic and various other laboratory activities of the Animal Disease Eradication and Animal Inspection and Quarantine Divisions formerly performed for the most part by the Pathological Division of the former BAI, are now the responsibility of our Section - The Program Services Section of the Animal Disease Eradication Division.

In order to acquaint you with the laboratory services that are and will be available to you through our Section and to point out how these services can best be used to meet your needs, I would like to review with you today our present and projected organization. The word "projected" is used since we are looking ahead to considerable expansion of diagnostic and related laboratory services in the regulatory field with the completion of the new Animal Disease Laboratory at Ames, Iowa. The regulatory laboratories will occupy approximately 20 percent of this structure when it is completed about 1960. Our Section has the responsibility for planning the regulatory laboratories in the new building and this work is actively in progress at the present time under the supervision of Dr. Glenn B. Van Ness. We shall take time for a quick review of these plans a little later.

All of the services of our Section have the basic requirement of adequate laboratory facilities. As most of you know, in June 1955, a group of competent scientists from outside the Department were asked to inspect our animal disease laboratories located at Washington; Beltsville, Maryland; Auburn, Alabama; and Denver, Colorado, to determine the possible hazards to human health involved in working in these facilities. The committee reported that laboratories in use were not adequate to safeguard workers and other persons in the buildings from exposure to disease or the experimental work from cross-contamination. Because of this report, it was

decided to discontinue all laboratory work in the research and regulatory fields at Washington, Auburn, and Denver. This has resulted in the curtailment of some work, and the need for establishing suitable laboratory facilities elsewhere and entering into cooperative programs with the States for conducting essential services that cannot await completion of the new laboratory. Various State laboratories have been most cooperative in lending their assistance as needed during this interim period. Our field personnel too have adjusted to the situation very well, and have realized that our shortage of laboratory space and service is an interim situation.

The laboratory service requirements of the Animal Disease Eradication Division and Animal Inspection and Quarantine Division for operational purposes may be grouped under three headings: (1) Biologics Development, Serology, and Chemistry; (2) Pathology and Microbiology; and (3) Biological Projects Control and Testing. Each of these will be discussed with the viewpoint of relating them to your field activities.

Biologics Development is presently concerned for the most with the production of Brucella antigens used in the State-Federal programs for the eradication of brucellosis. Last year 854,580 cc. of Brucella plate antigen, 263,520 cc. of tube antigen, and 186,480 cc. of milk ring test antigen were produced by this unit at Beltsville under the direction of Dr. E. L. Love. In this field, also, the Program Services Section has the responsibility of supervising and consulting with the State-ADE Brucella Testing Laboratories in the various States to promote the accuracy and standardization of testing procedures. This work is under the supervision of Dr. O. J. Hummon, Assistant Chief of the Section. Limited survey testing with Leptospira antigens has also been recently undertaken by the Biologics Development Unit. In the new laboratory at Ames this unit will also be responsible for producing pilot lots of new diagnostic agents and biological products as methods of production are released from the research laboratories. They will also produce small batch lots of biologics such as mallein, johnin, and others that are not available commercially and also products to be used for standardization purposes. Tuberculin formerly produced by the Agricultural Research Service is now purchased under government contract from commercial sources.

Serological testing is another important function of the Program Services Section. The importance of the serological diagnosis of vesicular diseases such as vesicular exanthema and vesicular stomatitis is well-known to all of you. This work is conducted in the Beltsville laboratory under the direction of Dr. E. W. Jenney. Serological diagnosis of anaplasmosis is another activity conducted at the Beltsville laboratory by Dr. W. H. Martin. This unit also tests all equine serum samples submitted from the various quarantine stations and other points for dourine and glanders as a service to the Animal Inspection and Quarantine Division. Recognizing the importance of serological typing to the formulation of sound control programs for salmonellosis of animals, the Animal Disease Eradication Division established on April 15 of this year a cooperative program with the U. S. Public Health Service to supplement their activities in this field. An ADE bacteriologist, working under the direction of Dr. P. R. Edwards, Communicable Disease Center, Cahmblee, Georgia, has been assigned the task of working exclusively in the identification of Enterobacteriaceae

of animal origin. This will permit State Animal Disease Diagnostic Laboratories to submit their cultures for typing and study, thus contributing greatly to control programs for this important group of diseases.

The Section's Chemistry Laboratory is located in Washington under the direction of Mr. F. A. Spurr and is responsible for the testing of dips and disinfectants, preservatives in biologicals, and various chemical analyses.

The pathology and microbiology unit is concerned with diagnostic activities relating to microscopic and macroscopic histopathology and the isolation and identification of the causative agents of disease. This unit acts as a reference and confirmatory laboratory for both common and unusual disease conditions encountered in the field. It is also a repository for pathological materials and is responsible for coordinating State and Federal activities in the field of animal disease diagnosis. Future plans call for the organization of teams of trained diagnosticians, who will be constantly available for field investigational work when diseases of unusual nature or high mortality or morbidity are encountered.

Our diagnostic needs in the field of histopathology are presently being met by a cooperative arrangement with the Meat Inspection Division laboratory at Beltsville. This laboratory is examining fixed tissue specimens for evidence of tuberculosis as a service to the Tuberculosis Eradication Section and ovine specimens for scrapie as a service to the Special Diseases Eradication Section.

In order to expand our laboratory services in the field of diagnostic pathology and microbiology plans are in progress to establish an interim laboratory facility at Ames, Iowa in the near future under a cooperative agreement with Iowa State College. This will permit us to expand our activities in the diagnostic fields. Work to be conducted in the interim laboratory at Ames include routine histopathology, bacteriology, virology, mycology, and serology. Efforts will be made to isolate and type cultures of M. tuberculosis from tissue specimens collected on the killing floor for additional information on no visible lesion reactors; to isolate Brucella from milk samples to supplement data on serological tests; and to provide a repository for cultures used in biological production and testing. You will be notified when these facilities are in operation and their services available for your use.

The Biological Products Control and Testing Unit of our Section is a cooperative effort with the Biological Products Licensing and Inspection Sections of the Animal Inspection and Quarantine Division. Laboratory services in this field have been quite limited in the past mainly because of a lack of adequate standards and facilities for this purpose. With the completion of the new laboratory at Ames the needed facilities will be available, and at present the AIQ Division in cooperation with our Section is establishing workable standards for key biologicals.

The Virus-Serum-Toxin law requires licenses to be issued for veterinary biologics that move in interstate and foreign commerce. These products must not be worthless, contaminated, dangerous or harmful. To assure the safety

and potency of biologics, such a determination must first be made at the time licenses are issued by employing testing procedures to evaluate the products. The types of products now being presented for license and the problems encountered in continually assuring the livestock owners of safe, potent, and uncontaminated products have changed. The trend of industry is from the so-called "killed" products to the live and modified live virus products. In 1945, of the 763 licenses, only 81 were of the live virus type, whereas in 1957 it is estimated that of the 1,058 licenses, 350 will be of the live and modified live virus types. The volume of doses produced each year of these newer type preparations is tremendous, increasing from 288 million doses in 1945 to 2,146 million doses in 1955. The testing procedures and the amount of testing previously applied have been inadequate. Increased testing of veterinary biologics has been requested by livestock owners, State research and regulatory personnel, various poultry producer organizations, and others, such as the United States Livestock Sanitary Association and the Animal Biological Industry itself.

Because of the lack of Federal testing facilities, it has been necessary to contract with sources outside the government to conduct stipulated tests under direction. This service has been exercised mostly for specific lots of products reported to have caused trouble when used in the field. Other products are being checked routinely by outside laboratories such as the work with erysipelas vaccines at the University of Nebraska. Some biologics testing work is carried out at the Beltsville laboratory including sensitivity tests on contract tuberculin and pullorum antigens as well as standard tests on Brucella strain 19 vaccines.

With the increased funds that have been requested the work in the field of biologics testing will be considerably expanded and the foundation laid for permanent establishment of the biological products testing and control laboratory at Ames.

The personnel needed to meet the laboratory services that have been outlined here today is indeed large. It is believed that much of this need should and can be met by Division personnel with field experience and an interest in laboratory service and field work. Many of the activities proposed are in new fields and offer an exciting challenge. Selected Division employees are presently being encouraged to undertake graduate study programs to better prepare them for work in the new laboratory at Ames.

Now a final word about the new laboratory. As most of you know, it is to be located a few miles northeast of the city of Ames on a 318 acre tract of land. The laboratory compound will occupy about 20 acres and will contain the laboratory proper, designated the small animal laboratory, and five large animal laboratories. The remainder of the land will be used to quarantine and house large and small animals to be used in diagnostic and research work. Laboratory services for the ADE and AIQ Divisions will occupy approximately 20 percent of the total space and will be divided into the various laboratory divisions discussed with you today. It is presently expected that the building will be completed in 1960. (Sketches of the new Ames Animal Disease Laboratory were shown and discussed.)

POULTRY DISEASES SECTION

By Dr. R. E. Omohundro

On March 16, 1956 the present Animal Disease Eradication Division organization chart was approved to include the Poultry Diseases Section. The present head of that section reported to Washington, D. C. for duty on July 29, 1956.

This represented the first official action to include poultry diseases within the scope of the ADE Division. Considerable time and travel has since been devoted to getting acquainted with the problems peculiar to the poultry industry and the various groups and agencies connected therewith.

Through the years when the majority of the poultry industry was developing from a farm flock basis to the large integrated operations of today, there were many obstacles to overcome. Antibiotics and other products have been added to feeds for the purpose of stimulating rapid growth. During these years few practicing veterinarians or livestock sanitary officials have devoted much time to poultry disease problems. As a result, the poultry feed milling companies have developed a group of lay service men who diagnose and treat the flocks in which their employees have a financial interest.

Simultaneously with the phenomenal growth of the poultry industry, a group of poultry pathologists have developed in the highly specialized field and have performed an outstanding service to the industry. These men are mostly located at State experiment stations and diagnostic laboratories.

In 1935 the National Poultry Improvement Plan was organized under the U. S. Department of Agriculture and the National Turkey Improvement Plan was organized in 1943. The purpose of the two Plans is to improve the production and market qualities of chickens and turkeys and to reduce losses from hatchery disseminated diseases (pullorum). Both Plans are optional with the States and the individual members of the industry within the States. The Plans are administered in each State by an official State agency cooperating with the Animal and Poultry Husbandry Research Division of the Agricultural Research Service.

Psittacosis or ornithosis of turkeys has become a serious problem in some sections of the country in recent years. This was first called to nationwide attention in 1948 when poultry processing plant workers became infected with a disease which was eventually diagnosed as psittacosis. Epidemiological studies proved that the disease originated in turkey flocks which had been processed in those plants. Serological evidence of psittacosis or ornithosis has been reported in 15 States and virus isolations have been reported in 7 States.

The disease has been diagnosed in Texas nearly every year since 1948 and has been serious. Early in 1956 the disease was diagnosed in Oregon turkey flocks as the result of human cases encountered in processing plant workers.

Psittacosis or ornithosis is a virus disease closely resembling pneumonia. There is no evidence that the disease is egg transmitted and no effective vaccine has been developed. At this time there is no standardized test for the disease, and no concrete evidence exists to point out the reservoir of infection which causes its spread.

In other words we really do not know enough of the vital answers to inaugurate an eradication program. Treating infected flocks with large doses of the oxy- or chlortetracycline compounds over an extended period of time has been fairly successful under controlled conditions, provided the apparently recovered flocks are slaughtered soon after the cessation of treatment. One commercial flock has been infected 3 times, twice following treatment. Therefore it does not appear safe to say that presently known treatments are the whole answer.

Part 82, Title 9, CFR prohibiting the interstate movement of poultry affected with psittacosis or ornithosis was published in the Federal Register on March 7, 1957 to become effective 31 days later. This regulation pertains only to domestic fowl since the psittacine birds are the responsibility of the U. S. Public Health Service.

There are no known cases where persons preparing dressed poultry for cooking or persons eating cooked poultry have contracted the disease. However, the disease hazards are definitely occupational for producers and processing plant workers.

On March 5, 1957 an ADE Division Notice was issued to all field stations which authorized attendance of Division personnel at Poultry Disease Short Courses in their respective States. Negotiations are in progress to conduct a Poultry Disease Diagnostician's School at Iowa State College during the coming fall months. The purpose of the school is to train key personnel from major poultry producing sections of the United States to facilitate the early diagnosis of foreign or unusually fatal diseases of poultry. The actual training program is to be conducted by the Program Services Section.

The Division intends to utilize its present personnel and organization to cope with poultry diseases in much the same manner as has been the plan with diseases of large animals. By disseminating up-to-date information on poultry disease to full-time regulatory veterinarians, we hope to stimulate the practicing veterinarians to become interested also.

## PUBLIC STOCKYARDS INSPECTION ACTIVITIES

by  
Dr. T. W. Cole

Public stockyards inspection was authorized by the Act of May 29, 1884, creating the old Bureau of Animal Industry. The Act, among other things, specified that investigations were to be made of contagious, infectious and communicable disease along lines of transportation from all parts of the United States to ports from which livestock are exported, and provided for such disinfection and quarantine measures as may be necessary to prevent the spread of disease from one State or territory to another.

Contagious pleuropneumonia of cattle was the first disease eradication effort undertaken by the Department in cooperation with the States affected. Controlling the interstate movement of cattle through market centers greatly shortened the time required to completely eliminate the disease. This led to the first Order issued October 20, 1890, requiring inspection at public stockyards of cattle destined overseas. The discovery at that time that cattle ticks transmitted Texas or splenetic fever made this disease of first importance to be controlled by stockyards inspection. In 1897 inspection was extended to include sheep for scabies, and in 1903, cattle for scabies. The scope of work was further extended in 1905 to the inspection for all communicable diseases of all livestock received at public stockyards.

Since the beginning of livestock disease control and eradication work, the unrestricted movement of diseased animals has been recognized as one of the most important factors in the spread of disease. Due to the threat from abroad of foreign livestock diseases, particularly foot-and-mouth disease, proper and efficient inspection at livestock markets is more essential now than at any other time in the past. Of prime importance in coping with this and other dangerous communicable diseases are early detection and prompt diagnosis. For this reason, the inspection of livestock at market centers is almost indispensable in the control of disease. The sooner a disease is discovered and the affected animals isolated the fewer will be the number that become infected and exposed. By the same token, the sooner the disease is traced back to point of origin the less likelihood there will be of further dissemination of the disease from that locality. The value of the service to the livestock industry as a whole would be difficult to estimate.

Livestock at public stockyards come from widely separated areas and this inspection offers an excellent opportunity to examine for disease a cross section of the livestock population of the country almost daily at a minimum cost. Our greatest defense against the widespread dissemination of the disease may be found at public stockyards where inspection is maintained by employees who are trained to detect foot-and-mouth disease, vesicular exanthema, and other devastating maladies.

Livestock inspection service is maintained at 59 stockyards in 57 cities. Veterinarians who, through years of experience, have become skilled in the detection of animals affected with disease or other abnormal conditions are constantly on duty examining the animals that pass through these

stockyards each day. These veterinarians are assisted by laymen skilled in such work as the inspection of livestock, supervising the dipping of cattle and sheep for scabies, and cleaning and disinfecting premises, cars, and trucks used in the handling of diseased animals.

Insofar as possible all livestock that arrive at these market centers during daylight hours are inspected at the time of unloading, while animals that are unloaded and yarded during the night are inspected early in the morning before the trading commences. If signs of any communicable disease are detected, all infected and exposed animals are promptly segregated and treated or otherwise handled in accordance with Department regulations. The inspectors are constantly on the watch for animals showing any symptoms suspicious of foot-and-mouth disease or vesicular exanthema.

The livestock sanitary official of the State in which a diseased shipment originates is notified as well as the animal disease control field station in that State. In this way centers of infection are located, and the spread of disease to other herds and premises is frequently prevented by the prompt application of appropriate sanitary control measures. Instances are not uncommon in which the detection of disease in a shipment at a public stockyard is the owner's first inkling of the existence of infection on his premises.

Not only are incoming shipments of livestock inspected, but a reinspection is made of outgoing shipments, both to detect disease and also to determine whether there has been compliance with certain requirements, such as the tests for tuberculosis and brucellosis, dipping for scabies, and immunization against hog cholera.

The very large scale on which this livestock-inspection service is conducted is indicated by the fact that each year there pass through these public markets for slaughter or other purposes between 70 and 75 million livestock.

Interstate shipments of livestock for immediate slaughter may be made to public stockyards under regulations that are less restrictive than if the animals are to be forwarded direct from a country point in one State to a country point in another State for feeding, breeding, or dairy purposes. If, however, it is found after arrival that some of the animals would sell to better advantage for purposes other than for slaughter, they then must meet the same test requirements that would have been applicable had they been shipped direct to a country point in another State.

Department employees at public stockyards supervise the application of the tests for tuberculosis and brucellosis and see that those animals which do not pass a satisfactory test are removed from the consignments to which they belong and are slaughtered or otherwise properly disposed of, as may be prescribed in the regulations. The bulk of all the cattle that react to the tests for tuberculosis and brucellosis in the present cooperative Federal and State eradication campaign are sent to these public markets for slaughter. The employees at the markets exercise the utmost vigilance to see that the identity of these reactors is maintained and that they are penned separately in the yards and required to be disposed of for immediate slaughter at establishments operating under Federal meat inspection.

Whenever disease is found in a shipment of livestock arriving at a Federally inspected stockyards steps are taken immediately to see that the pens occupied by the animals, the car or other vehicle in which they have been transported, and the yards through which they have been handled at the point of origin - and en-route if they have been unloaded for feed, water, and rest - are properly cleaned and disinfected.

Another activity over which the Department exercises supervision at public stockyards is the immunization of swine against hog cholera. Included in receipts at many of the large markets are a considerable number of pigs which are not in first-class slaughter condition. Under the regulations in effect it is possible to sort out such animals from the consignments in which they are received and sell them for interstate shipment to country points for further feeding to make them suitable for slaughter, provided they are properly treated against hog cholera.

Such swine may be moved interstate from public stockyards for any purpose only to States the laws, rules and regulations of which provide for the segregation and quarantine of imported hogs for a period of not less than 3 weeks. In order to be eligible for such shipment certain inspection and certification requirements must be met. The swine must be inspected by a Federal veterinary inspector at the yards.. If they are found free from symptoms of cholera or other communicable diseases and in a thrifty condition, they must be treated by an accredited veterinarian under Federal supervision, provided the temperature of each animal is taken before treatment and that only those with a temperature of less than 104°F. shall be certified for interstate movement. If the inspector finds any hogs affected with cholera, the entire lot to which they belong may be treated by a competent veterinarian under Federal supervision and held in a portion of the yards set aside for that purpose. At the expiration of not less than 30 days, if no signs of disease are observed on examination of the hogs, they may be released for shipment. All immunized swine must be disinfected by dipping in or spraying in a bath containing a 2 percent solution of a permitted cresylic disinfectant, must be accompanied by a certificate issued by a Federal veterinary inspector, and must be transported in cleaned and disinfected cars or other vehicles.

Consignments of sheep and cattle received at public stockyards in which scabies infection is found or which have been exposed to the disease, if not sold for immediate slaughter, are dipped in accordance with applicable regulations under Federal supervision. Included in the receipts of sheep at these stockyards are many animals not in a fit condition for slaughter. These are sorted out of their consignments and sold for breeding purposes. Many of them are dipped as a precautionary measure to comply with the requirements of the State to which they are destined or at the request of the purchasers, even though there is no actual knowledge that they have been exposed to scabies. This dipping also is performed under Federal standards and supervision.

In the past, when practically all livestock moved to market by rail, arrivals could be anticipated in advance through the cooperation of transportation lines and stockyard officials. This made it possible to integrate an efficient inspection service with the orderly unloading, yarding, weighing, and disposal of all animals. Now the heavy receipts by trucks make it exceedingly difficult to assure that every animal is properly inspected. These unscheduled arrivals in lots, varying from one animal to large truck loads with the capacity of a railroad car, pose a problem at the stockyards where too often the design, size, and arrangements of facilities are those developed for rail transportation, and which have had to be remodeled to take care of truck shipments. Another important factor from an inspection standpoint is that dock facilities for loading and unloading truck and rail shipments are necessarily at different locations, thus requiring the services of two or more inspectors where formerly one sufficed.

Specifically Approved Stockyards: Under the new Federal regulations to prevent the spread of brucellosis and paratuberculosis, effective January 1, 1957, provision was made for specifically approved stockyards. At these markets the cost of inspection service is paid by the State. Operators of such yards, which are usually auction markets, sign an agreement to permit no cattle to be removed without the proper certificate or other form of release issued by the inspector, to segregate brucellosis and paratuberculosis reactors until they are sold for slaughter, furnish suitable cattle chutes for restraining animals, laboratory space for conducting brucellosis testing, provide adequate facilities and services for the cleaning and disinfection of trucks or other vehicles transporting such reactors and otherwise cooperate with the State and Federal officials to effectuate the provisions of the brucellosis and paratuberculosis regulations. As of June 1, 801 livestock markets have been specifically approved by the Director of the Animal Disease Eradication Division. These specifically approved markets operating under veterinary inspection at State expense to enforce brucellosis and paratuberculosis regulations, should not be confused with public stockyards where Federal inspection is maintained and all animal quarantine laws and regulations are enforced.

Posted Stockyards: This is a term used for a stockyard which has been posted by the Secretary pursuant to the Packers and Stockyards Act of August 15, 1921, regulating the business practices of stockyard owners, sales agencies and others operating at a stockyard. Apparently there is some misunderstanding by livestock people, stockyard employees, and occasionally State and Federal inspectors, regarding the inspection service of the Animal Disease Eradication Division, ARS, and the Packers and Stockyards Division, AMS. Most of the stockyards with ADE inspection also are posted under the Packers and Stockyards Act.

There need be no confusion with respect to the services these two agencies provide. The Packers and Stockyards Division is concerned primarily with trade practices such as fees for selling livestock by commission companies, service charges like yarding, weighing, feeding, dipping, dehorning, branding, etc., furnished by the yard company and vaccination, testing and otherwise treating animals by practitioners. Whereas, our Division's principal interest is in the health of the animals and in taking steps to prevent the dissemination of disease in interstate commerce.

To summarize: the purpose of public stockyard inspection is (1) to restrict

the movement of diseased animals, (2) supervise the treatment and proper disposition of diseased animals, (3) notify States of origin of diseased animals received (4) supervise the cleaning and disinfection of infectious stockyard pens and facilities, and transporting cars, trucks and other vehicles, (5) issue certificates for the interstate movement of animals which have been inspected and found to be apparently free of any contagious, infectious, or communicable disease, (6) supervise the dipping, vaccination, and testing of animals prior to shipment.



AUTHORITIES AND LIMITATIONS FOR ADE COOPERATIVE DISEASE  
ERADICATION PROGRAMS

by  
Dr. A. F. Ranney

The authority for the Cooperative Disease Eradication Program was first promulgated by the Acts of Congress of 1884. That Federal Act provided for cooperation with the various States and Territories in order to effect the suppression and extirpation of communicable diseases of livestock.

The Act of 1903 extended the authority of the Secretary of Agriculture to prevent the introduction or dissemination of any communicable disease in the U. S. by providing specifically for federal inspection of livestock and the issue of certificates for interstate movement.

The Act of 1905 empowered the Secretary of Agriculture to establish a Federal quarantine to prevent the spread of a communicable livestock disease from one State to another. This is also intended to assist the States in controlling the spread of animal diseases from certain areas.

Under Section 114a, Title 21, U. S. Code the Secretary of Agriculture, either independently or in cooperation with States or political subdivisions thereof, farmers' associations and similar organizations, and individuals, is authorized to control and eradicate tuberculosis and paratuberculosis of animals, avian tuberculosis, brucellosis of domestic animals, southern cattle ticks, hog cholera and related swine diseases, scabies in sheep and cattle, dourine in horses, scrapie and blue tongue in sheep, incipient or potentially serious minor outbreaks of diseases of animals, and contagious or infectious diseases of animals (such as foot-and-mouth disease, rinderpest, and contagious pleuropneumonia) which in the opinion of the Secretary constitute an emergency and threaten the livestock industry of the country, including the purchase and destruction of diseased or exposed animals (including poultry) or the destruction of such animals and the payment of indemnities therefore, in accordance with such regulations as the Secretary may prescribe. As used in this section, the term "State" includes the District of Columbia and the Territories and possessions of the United States.

Now, when the Secretary determines that a particular disease should be eradicated he may enter into a cooperative agreement with a State or States to accomplish that end. The plan may include the purchase and disposal of diseased or exposed animals. The terms under which cooperative programs operate are included in a document known as the Memorandum of Understanding which outlines the respective duties and responsibility of the Federal and State Agencies. The agreement endorses the use of uniform methods and rules and the enforcement of State laws and regulations. For many years, in the interest of uniformity, procedures for livestock disease control have been agreed upon at annual meetings of the U. S. Livestock Sanitary Association, where all States are represented. States officials are usually willing to use these recommendations as a guide with regard to tuberculosis and brucellosis eradication. The Division usually approves recommendations made by the U. S. Livestock Sanitary Association with the exception of minor changes.

In the case of bovine tuberculosis, there has been a series of what is known as "Uniform Methods and Rules" for the Establishment and Maintenance of Tuberculosis-free Accredited Herds of Cattle and Modified Accredited Areas. These procedures have been agreed upon by representatives of most of the States, as referred to above, at the annual meetings of the U. S. Livestock Sanitary Association and have been approved by the Division. There is no legal authority in these uniform methods and rules; however, in most States laws have been enacted which authorize livestock sanitary officials to proceed on the basis of the requirements that are stipulated in these uniform methods and rules.

As we proceed under cooperative programs we should be cognizant of our legal authority. Basically, the State officials operate under the laws of their State concerning the diagnosis of disease and quarantine and control of infected or exposed animals within the State; while Federal officials are responsible for enforcement of laws to control, or prevent the spread of, animal diseases beyond State boundaries.

The cooperative programs are designed to provide for the interchange of information and planning that will benefit the livestock industry on both the local and national level. Thus Federal officials are commonly authorized by the State to operate under State laws and regulations in conjunction with their duties as Federal employees.

The actual operation of cooperative programs vary somewhat in different States. In some instances the State officials may be more active and assume greater responsibility for a certain program or phase of a program, while the Federal officials may devote more time and attention to some other program. In most States it is arranged so that both State and Federal employees give approximately equal attention to administering the cooperative programs within the state. In such instances Federal veterinarians are essentially carrying out State and Federal requirements in their particular area. In one State the local regulations must be enforced by State Civil Service Employees, only. In many States, however, Federal employees are properly deputized to act for the State.

Federal officials must render service to the extent of funds and personnel available and within the limits of funds appropriated by Congress for the purpose. We are authorized and responsible for keeping those with whom we cooperate informed concerning all limitations to the successful conclusion of those livestock disease eradication projects for which Federal funds are being expended. In all instances complete understanding and interchange of information between State and Federal officials is essential.

## PUBLIC RELATIONS IN PROGRAM ADMINISTRATION

by

Dr. E. E. Saulmon

Good public relations is recognized as an essential commodity for good program administration. Your presence at this Veterinary Development Work Conference should be indicative that you have demonstrated traits of leadership and supervisory abilities in disease control and eradication activities in your working assignments. I am confident that you have learned at this stage in your careers the importance of good public relations in gaining recognition in your work. If you had not learned the value and importance of public relations, it is doubtful that you would be here today.

Webster's dictionary defines public relations as, "The activities of a cooperation, union, government, or other organization in building and maintaining sound and productive relations with special publics such as customers, employees, or stockholders, and with the public at large, so as to adapt itself to its environment and interpret itself to society." You could express it as "the act of selling yourself and your organization to the people or public with which you are dealing".

The term "public relations" was coined shortly after the close of World War I and stems from publicity and press agency; but today it involves, first and foremost, the formulation of policies which must be put into practice to achieve or strengthen the desired goodwill of the public. It analyses the needs and desires, the prejudices and predilections of all interested parties concerned, such as fellow employees, livestock owners, marketing representatives, cooperating agencies, and our supervisors, in order to conduct the affairs of our programs more responsively to them.

Public relations has become "big business" in industry and the business world of today. Private industry recognizes that it is worthy of great efforts and expenditures of large amounts of money to be assured of the proper relations between it and the public which uses its services or buys its commodities. In organized public relations campaigns as put forth by major industrial establishments, banking concerns, large stores, labor unions, non-profit organizations, and others, every medium of communication is applied, i.e., press, radio, television, motion pictures, publications, meetings, and personal contacts. It is recognized that the opinion of the public can be molded if properly approached.

The need for good relations with the public is just as essential in government. The general public is more conscience of its influence as a group response than was true in years gone by. No longer are we able to be dictatorial in our dealings with livestock owners, industry representatives, cooperating

State officials, subordinates in our own organization, or anyone with whom we come in contact or with whom we are associated. Our actions, as employees of the government as public servants, are under scrutiny at all times. In other words, we are practicing public relations in all our actions. As we drive down the road in a government vehicle, the practice of safe, sane, courteous driving is good public relations.

Webster's definition of public relations assumed it to be efforts toward building and maintaining sound and productive relations. Discourtesies and improper actions conversely will tear down or destroy the productive relations that have already been established. The fast and reckless driver does not instill friendliness or good relations with occupants of the car that was crowded off the road. What has been your reaction toward a business firm whose delivery truck crowded you out at a traffic light or cut in front of you in heavy traffic in a discourteous manner? Did it stimulate you to want to do business with the firm that the driver represented? We must remember that we are constantly in the public eye. Our actions are being judged at all times whether we are addressing a group of livestock owners, eating in a local restaurant, or just driving down the road, we are being judged as an employee of the Agricultural Research Service. Whatever that judgment is, it is applied to all employees of the Agricultural Research Service.

One of our goals in program administration is to establish and maintain a position of confidence with the livestock industry and our cooperating agencies so that we can enjoy uninterrupted operations and maximum accomplishments. Good public relations will not only make this possible but will help assure the success of our endeavors. The caliber of our cooperating State officials of today is generally much better than in years past. More and more we are working with intelligent, capable, career, disease control officials that are interested in serving the public to the best of their abilities. We are in their State on a cooperative basis, operating under their laws and regulations. We should remember at all times that we are there upon invitation and should conduct ourselves with good manners in our program operations.

Even though big business thinks in terms of large organized public relations campaigns to shape the mass mind favorably toward their product or service, you as individuals, working with the public to control and eradicate animal diseases or to keep foreign diseases from becoming established in this country, are the important representatives of A. R. S. You are in the best position to earn for it a good reputation with the public. You and those under your supervision who are in direct contact with the livestock industry and all of its segments are the ones who shape the opinion the public has of our organization and the programs that are being offered by it.

One of the first requirements of good public relations in program administration is to know your programs thoroughly so that any information or representation

by you will instill confidence and accurate understanding. If an organization and the people representing it are sincere, most any criticism that arises can be traced directly or indirectly to misunderstanding. Care should be exercised at all times to maintain a constant atmosphere of understanding and trust. You must first sell yourself as an individual and then in turn the programs and agency you represent will be accepted by those with whom you come in contact.

Good public relations, so essential to our work, must be built on a thorough knowledge of our assignment, appreciation and respect for our associates, and an everyday demonstration of conscientious effort in carrying out these principles.



## VESICULAR EXANTHEMA ERADICATION

by  
Dr. F. J. Mulhern

Have you ever wondered after the President declares a state of emergency why such broad powers become available to him immediately? Well, a somewhat similar situation develops on a smaller scale when the Secretary of Agriculture declares an emergency due to the presence of a disease in the country that threatens the livestock industry.

Usually funds are appropriated annually for the regular disease control and eradication programs, and they can not be used for any other purpose nor can our personnel be assigned to programs other than those for which funds have been appropriated.

When an emergency is declared, the Federal Government can cooperate with the States in the eradication of the disease and participate in the indemnity payments that develop. The declaration turns the key to the safe, so to speak, to provide funds to handle the emergency. The Secretary of Agriculture is authorized to use any funds available to him within the Department or to borrow funds from the Commodity Credit Corporation. This declaration does not broaden the powers of the Federal Government as far as having more authority to operate within the State. However, it indirectly can have some effect because it can stipulate the conditions under which Federal indemnity payments will be made.

The next question is probably, "How does this added authority come about simply because a state of emergency was declared?" Well, we must go back to the 1884 Act that provided the basic authority in order to prevent the spread of communicable diseases of livestock. In 1944 this Act was amended to provide the increased authority needed to handle emergency situations. It also allowed the Federal Government to pay indemnities cooperatively with the States or independently.

Once a declaration of emergency is declared the next step is to determine what regulations will be used to apply to the program. It may be necessary to develop some regulations or even to amend the present ones to make them applicable.

There are two sets of regulations that apply to any program where indemnities are involved. One set is designed to prevent the spread of the disease. In the case of vesicular exanthema, the set of regulations developed was referred to as BAI 383, Revised, or in the Code of Federal Regulations, Title 9, Part 76, Subpart B, Sections 76.28 - 76.37 inclusive. The other set applies to the payment of indemnities; and in the vesicular exanthema program the governing regulations, BAI 376, or Code of Federal Regulations, Title 9, Part 53, was used.

This latter regulation carried some limitations. It stated that after a declaration of emergency is declared by the Secretary of

Agriculture, State authorities are authorized to cooperate with the Department in the control and eradication of the disease. After the States agree to carry our approved control measures, the Federal Government can not pay more than fifty percent of the expenses for the purchase, destruction, and disposition of animals and materials. It contained a proviso that the Secretary may authorize other arrangements for payment of such expenses upon the finding that an extraordinary emergency existed.

If an emergency was declared, it is assumed that the interpretation of the last statement would be that the Federal Government could pay the full cost of expenses. Once again this does not give the Federal Government any additional authority within the State other than stipulating that certain conditions would be necessary before full payment would be made. However, in the nine times that foot-and-mouth disease was eradicated in this country, it was not necessary to declare an extraordinary emergency.

Precedents have been established in the vesicular exanthema, scrapie, and brucellosis programs whereby the Federal Government paid its share (not more than fifty percent) whether the States paid their share or not. In such cases, the State officials approved such payments before they were made. We often hear the discussion that if there was an extreme emergency, the Federal Government would take over if the States did not act.

I would suggest that we not rely on such an approach since our responsibility applies to preventing the interstate spread of infectious, contagious, and communicable diseases of livestock.

We can say, "In order to prevent the interstate spread of livestock diseases, you must prevent the intrastate spread; therefore, it would be necessary to regulate movement of infected and exposed animals within a State." However, we had a good example where we could have used such authority very beneficially during the early days of the VE program. The legal advisors were not too receptive to our proposals of exercising additional authority, claiming such moves on our part would be unconstitutional. There is still a school of thought that this approach has not been fully explored; but, for the time being, our responsibility begins and ends at the State line.

## POLICY: ITS PURPOSE, DEVELOPMENT, AND ACCEPTANCE

by  
Mr. Frank H. Spencer

I should like to preface my remarks by congratulating this group on the forward looking program which it is developing in the special preparation of staff members for positions of responsibility in its control and eradication program. The problem of providing competent leaders and supervisors is a hard one and one which will not solve itself. It is only as we plan intelligently to train and maintain a competent reservoir of staff members for assignments of this kind that we can count on a continuing high level of public service. Therefore, I am particularly glad to have a part in this session from which we all hope important results will flow.

Let me say in the beginning of this discussion of policy that nothing I present will be very original. Policy has been discussed for many years by people much more competent than I to develop all its implications. I confess freely that I have borrowed very broadly from what others have had to say on this subject, simply supplementing material from my own experience.

As a starting point we should perhaps define policy not from the dictionary standpoint but from the standpoint of finding out what it really means in practical application. There are almost as many concepts as there are textbooks in management. I have selected two which seem to me fundamental. Here they are: (1) "Policy sets out guiding principles to govern actions to insure consistency under repetitive conditions"; (2) "Policy is a statement of what is to be done. Administration is charged with the interpretation and execution of a policy. Procedure defines who does it, how it is done, and when". The first of these definitions seems to me to be an excellent statement of the over-all nature of policy; the second is a good working definition and also a safeguard against confusing policy with administration and procedure. Policy is broader than procedure. A well-known maxim is "Honesty is the best policy." Within this policy one should not loot the cash drawer, but refraining from dipping into the till is a practice and not a policy.

In its very nature, policy has two characteristics which may seem contradictory. First, policy can never be static or rigid. If it is, it will fail to fit into the conditions of operating necessity and will soon become outmoded. Second, it cannot be a constantly changing thing. While it must be responsive to the realities of an operating program it cannot shift with every change in conditions, but must without changing its basic character be adaptable in charting the course necessary to the attainment of purpose. To use an example, policy is more like a growing plant than a fixed landmark. Its germ can never change to a new species but, to follow the simile, its size, color, and productivity will depend greatly upon climate, environment, and other factors. These factors occur not only in nature but in the operation of a program.

Policy of course has an origin. Who originates it? In Government, which is the field of our principal concern, the original origin, if we may use

such a term, is Congress which by the enactment of legislation fixes the policy for the various areas of Government operation. Policy is further originated by the President through the issuance of Executive Orders and other declarations, heads of the various Departments of Government through orders and other documents, and further down the line by program administrators through their orders and rulings. Two other groups are of course in the background of policy origin. The first of these is the great body of United States citizens who by their votes and other expressions of public opinion have a large voice in determining the policy which shall be adopted in the functioning of Government. The second is the course which by legal decision frequently fix the framework within which Government agencies shall operate.

The development of policy of course does not stop with its origin. We must consider such questions as who determines particular stated policies. How do these "determiners" decide on the policy to be adopted, or on changes in it? How is policy expressed and used? And what is its relation to program administration and procedure? In all these questions we shall have to think about not only the determination of policy but also its application and acceptance. It is not possible to consider these fields as entirely separate and, therefore, our discussion will deal with various aspects without attempting in all cases to make a sharp breakdown between determination and acceptance.

Broadly speaking the one responsible for determining a stated policy is the top administrator. However he is not altogether a free agent in this function. First, the policy which he determines must be within the legal framework of his agency and of the program which he is administering. Second, he must allow sufficient latitude for the adaptation of his policy to the program by operators all up and down the line of administration. This implies both efficient communication and a reasonable degree of flexibility.

In the actual task of determining a policy the administrator must think specifically of a number of things. We have already said that his policy must be within the proper framework. To make sure of this the administrator must of course be thoroughly familiar with the text of the law under which he is operating. But this is not enough. He must also study what we call the "legislative history" of the act. It may well be that the text of the law is silent on some particular point but that either in the Congressional Committee reports on the bill or during debate in either House of Congress some statement was made as to the intent of the legislation which will be binding on the agency administering it. Another important factor for the administrator's consideration is the experience of responsible staff members. He should freely avail himself of this experience in the determination of his policies. However, once all the information is in hand the final decision is up to the administrator himself. He cannot simply count the votes and follow the majority opinion.

Policies, once they have been adopted, are frequently open to revision. Such revisions usually are not revolutionary but are nonetheless important. It is essential to keep the lines of communication open - up and down - to determine when a policy does need changing. Sometimes the man at the top is actually the last one to know when this time arrives. The people close to operations are in a position to determine just how effective a policy is

in its actual working and unless they are permitted and, in fact, encouraged to give their observations, much time and effort can be wasted before changes are made which although minor in themselves have important over-all results.

It should go without saying that no policy can be effective unless it is well expressed. It is fundamental that this expression should be in writing and that all policy directives should be clear, concise, and simple. We have all seen classic examples of how policy statements should not be written. However understandable a policy statement may be to the man who drafts it, it is not going to be worth much unless it can be clear to the operating staff which is going to apply it.

Indispensable as is a good written policy statement, something more is needed. Written statements should be supplemented with discussions at various levels in the operating line. It is the responsibility of supervision to see that all persons concerned with policy operation have a clear understanding of what the policy is and how it affects their work.

If a policy is worth setting up it follows that it must be used by all members of an organization. Undoubtedly some will be more concerned than others but if policies are confined as they should be to really important areas, there is no member of the staff who will not come in contact with policy. All staff members have an interest and a responsibility in this area. It is of course a temptation for any man to ignore a policy with which he does not agree, but such a course cannot be justified. It is unfair to the organization and to the dissenter himself. If any member of an organization considers a policy unwise or unworkable, certainly he should recommend that it be changed but unless and until his suggestion is adopted it is his responsibility to do his best to carry out the current policy.

Policy has a most important relationship to operating programs and to the whole process of administration and procedure. It is the broad framework within which programs are conducted and program objectives must be in line with policy. It is thus especially important that program operators have a clear understanding of policy and that those who determine policy have an equally clear understanding of the operating needs and limitations of their programs. Unless there is this mutual understanding there are sure to be operating errors, a considerable degree of individual frustration and sagging organization morale.

It is particularly important that an organization avoid becoming mechanical in its fixing and observance of policy. Both the quality of production and the morale of the staff is pretty sure to suffer when this happens.

No matter how well the policy may be conceived and how clearly it may be stated, it will fail in operation unless it meets with the acceptance of both the working staff and that segment of the public which is affected by an organization's operation. Probably the most important single element in securing acceptance of policy is that the policy must command itself to reason. This means that it must be fundamentally

sound and that it must consider the rights and interests of all parties to a situation. Probably most regulatory laws will never be popular but their effective enforcement is dependent on enforcement policies being impartial and considerate of the interests of the party being regulated rather than being based merely on an arbitrary exercise of the power conferred by law. This element of reasonableness covers a multitude of sins. If a policy has this great merit it can sometimes stand a surprising amount of technical flaws.

Internally a policy has a much better chance of acceptance if in addition to being reasonable it appeals to the creative abilities of staff members. A policy which simply contemplates cold efficiency often fails to do this. If the worker feels that under the policy of his organization he can not only advance but also grow in knowledge and usefulness, he can usually be counted upon to be an enthusiastic supporter of agency policy. If, on the other hand, he feels that he is hemmed in by restrictive policies his performance will tend at best to be perfunctory. Nothing contributes more to policy acceptance than the feeling of the staff that it has a part in policy formulation. As has been said before, no one can relieve top administration of its responsibility in this field, but top administration can make its task easier and also promote policy acceptance by seeking the views of employees at all levels and by using them whenever possible.

I know that all I have done is to sketch in quite broadly some very general aspects of the field of policy. Much of this material I think is fundamental and is essential to an understanding and appreciation of the problems you will encounter. I think, however, that what I have said should actually be the least important part of our discussion and the questions which you may raise and the opinions which you may develop will be the most helpful part of our study. I know of no better time than the present for me to stop talking and let your discussion get under way.

COMMENTS ON ADMINISTRATIVE SERVICES  
RESPONSIBILITIES AND FUNCTIONS

by  
Mr. Otto E. Bjorklund

The Administrative Services Division is one of three management divisions reporting to the Executive Assistant Administrator. The others are the Personnel Division, and the Budget and Finance Division. Since all the management functions are ostensibly included in these three management divisions, obviously, the Administrative Services Division handles all the management work not taken care of by the other two divisions.

Perhaps, it would be satisfactory for the purposes of our discussion today to claim that, if your problem does not involve the hiring and firing of personnel or their welfare, or the paying of bills and salaries, it will be handled by an Administrative Services employee either in one of the Regional Business Offices or by the Washington office. This overly simplified "rule-of-thumb" should be of considerable assistance to you in determining which management division personnel you should contact in connection with your future management duties.

I would like to say a few words about the five branches which make up the Administrative Services Division here in Washington and to explain, just briefly, some of their more important responsibilities and functions:

The Procurement Branch is responsible for the whole field of supply management. It is concerned with purchasing material, personal property, and services. It also handles the sale of excess personal property.

The Records and Forms Management Branch is responsible for developing satisfactory methods of creating, maintaining, utilizing and disposing of records; reviewing, analyzing, changing and creating forms; developing and supervising an economic communications system; and handling the mechanics of issuing administrative memoranda, temporary circulars, and other instructions.

The Personal Property Branch is responsible for the effective management, utilization, and disposition of personal property. This includes among many other things acquiring excess property from other agencies for use by ARS, identifying and classifying ARS personal property and providing accountability and control through inventories and other records, developing utilization and replacement standards, and allocating motor vehicles to the divisions.

The Real Property Branch is responsible for acquiring and disposing of real property, including space and land; developing and carrying out a program of utilization and maintenance of real property; developing a uniform real property accountability system; providing technical assistance on engineering, design and construction matters; and developing and maintaining a continuous long-range building program.

The Research Agreements and Patents Branch is responsible for formulating standards, principles, policies and methods pertaining to Research and Marketing Act contracts, Cooperative Agreements, Memoranda of Understanding, applications for patents and requests for licenses to use or practice under USDA controlled patents.

With the exception of the Research Agreements and Patents Branch, whose work is all performed in the Washington office, the Regional Business Offices' Administrative Services Units have personnel carrying on the work of the other four Branches. I should add here that a considerable part of the Real Property Branch's work is also performed in Washington. This includes the acquisition and disposition of land and buildings; preparation of revocable permits covering use of land and facilities; and management of residences provided ARS employees. The latter function will be transferred to the Regional Business Offices within the next several months. Each unit is headed by an Administrative Services Officer. He is assisted by procurement, property and records management personnel. Just recently - during the last six months or so - there have been added to the RBO staffs a Records Analyst and a Real Property Officer.

I would like to point out more specifically some of the matters that the RBOs are prepared to handle for you in the Administrative Services field:

The procurement specialists will buy all your supplies and equipment, except your small over-the-counter purchases or purchases of an emergent nature. They will handle the shipment of your household goods and personal effects.

The Records Analyst, in visiting your field station, will assist in disposing of accumulated records and recommend improvements in maintaining your files. He will, upon request, recommend that a new filing system be established.

The Real Property Officer will help you in acquiring office or laboratory space either by leasing it or by obtaining it rent-free. He will help you obtain the necessary utilities such as electricity and telephone service.

The personal property man will acquire excess property which you may need, upon your request, from property excess to other Government agencies.

And finally, but probably most important of all, the administrative services people, both here and in the RBOs will be ready to offer advice and assistance in obtaining the supplies, equipment, and all the other material things you will need to carry out your program responsibilities in the most effective way. After all, one of the main reasons for our existence, and this includes everyone in the management field, is to free you program people from as much clerical, administrative, and management paper-work as is possible. By so doing, you will have more time to do the important work you were trained for and hired to do, and for which Congress appropriates money and expects to see results.

I would like to introduce three of our key people who will discuss in more detail some of the matters that I have just briefly outlined. There is Mr. Jack Harrover, who is Chief of the Personal Property Branch; next there is Mr. Herb Duffy, who is Head of the Supply and Purchasing Section; then there is Mr. Charles Barrick, Head of our Current Records Section. These gentlemen will talk to you about their specialties in the administrative services field, and, after they have finished, will constitute themselves as a panel to try to answer any questions you may have.

Perhaps you are most interested in procurement matters. So, I will ask Mr. Duffy to lead off with his comments.

## PROCUREMENT

by  
Mr. H. C. Duffy

No doubt, by now, you fellows have had a lot of dry material presented to you but as you know it is necessary that we still feed horses dry feed and inject them with many antibiotics. I'm sure that a veterinarian would not think of using antibiotics without a definite procedure, policy, or what have you, any more than we in Administrative Services would operate without having similar procedures for procurement that are in the nature of laws and regulations. The information that is contained in my subject for discussion may lead one to believe that we, in procurement, are bound rather tightly in our operations by many laws and regulations. I would like to point out that even with these many "guide lines", shall we say, we are still able to get for you your required needs in connection with your programs. We want to make it clear that we will always be available to offer our advice or technical assistance whenever you may need services or supplies under unusual circumstances as well as in your normal course of operations.

This brings to mind that a few years ago one of the research laboratories had an experiment underway for an extended period of time which required among other things, storage in controlled temperature rooms at various degrees. During the course of this experiment, one of the compressors broke down, as you can well imagine, in the middle of the night. The guard on duty, during one of his rounds, noted and reported this incident to us. It was necessary under the circumstances for us to get out of bed and obtain the services of a refrigeration mechanic as promptly as possible to save the experiment realizing, of course, that all companies and servicemen were not at their usual place of business during these early morning hours. We were successful in obtaining the services of a refrigeration mechanic to do this repair work, but at a premium cost. The important thing, however, was that we did have the repairs made before the chemists reported for work the following day, and we were able to have the repairs completed without any adverse effects on the experiment.

In still another research program, the project required the obtaining of suitable animals to establish a known herd of cattle at one of our experimental farms. The program included comparisons of productivity of these animals with that of other strains developed at the experiment farm over the past one-quarter of a century. The genetic background of the animals had to be known and unless this type of animal was procured for this program, it would have been necessary to conduct tests for at least five or six years to establish research data which would not be necessary in acquiring a group of cattle with known background. Since we knew of only one source of supply that could meet our requirements, we made the purchase at a cost of \$1200 in the open market without advertising.

I will endeavor to give you a brief resume' on the procurement function, some of the problems relating to the purchasing work and the reasons why it is necessary to comply with certain of these regulations.

As you know, we in Administrative Services, are very much concerned with your particular welfare. We are trying constantly to revise and improve procedures to eliminate any cumbersome items which may affect your operating programs. In this connection, proposed legislation, policies and procedures, (Many of them initiated by the General Services Administration) are brought to our attention for review and comment. Some of our recommendations are accepted and some are not. We attempt to obtain some form of relief or concession from suggested proposals which we feel would be burdensome to ARS.

The procurement functions are subject to all kinds of laws, authorizations, regulations, procedures, restrictions, and exceptions.

Our basic authority for performing purchasing and contracting functions is contained in Section 3709 of the Revised Statutes. The fundamental principle of this authority is to give all an equal right to compete for Government business, to obtain for the Government the full benefit of competition and to prevent favoritism and fraud in public advertising. In brief, it provides for advertising for supplies, equipment, all services except under certain conditions. Some of those conditions are (1) when the amount does not exceed the statutory limit of \$500 which you fellows will be very much interested in and which we have referred to often as open market procurement, (2) when there is only one source of supply, and (3) in emergencies such as emergencies requiring immediate delivery; immediate repairs to equipment, etc.

I'd like to give you just a little bit of background on what we refer to as the Federal Property Administrative Services Act of 1949. It is generally referred to as Public Law 152 which created the General Services Administration. Invested in that Agency is authority to prescribe regulations and policies relating to procurement management.

We, in the Department, must recognize the role that GSA plays in discharging their responsibilities under this law. We are constantly in consultation with GSA on various matters pertaining to procurement in order to promote better relations with that agency as well as to seek ways and means to improve procurement work. For example, years ago many of the Federal Supply Schedules and contracts, which were executed by GSA, were mandatory in scope which, of course, meant that all purchases had to be made under the Federal Supply Contract. However, due to the efforts of the Executive Department and especially to the Department of Agriculture, we were instrumental in providing a \$25 exemption in these contracts which permitted agencies to purchase from local dealers without violating the mandatory provisions of the contract.

Time will not permit us to discuss in detail the various laws, limitations, and restrictions, etc., that appear to be cumbersome upon the procurement officer and also to you folks, but I will mention a few of them. For instance, there is a provision in the Agriculture Appropriation Act which prohibits the purchase of twine made from materials purchased outside the United States. The purpose of this regulation is to encourage the use of cotton in the United States.

Congress has also seen fit to establish the maximum purchase price of \$1,350 for a passenger vehicle. This past year, they have seen fit to add another restriction, that of \$1,800 for station wagons. Tentatively, I believe, GSA is currently recommending legislation for increasing limitations to \$1400 for passenger cars and \$1900 for station wagons. In looking at the purchase requests for station wagons, a critical review must be made to assure that other vehicles such as carry-alls, panel trucks, or other types of vehicles would better satisfy the requirements than the station wagons. To people outside of the Government service a station wagon indicates luxury, and the Government, therefore, must be sure that these types of purchases are justifiable.

Steel filing cabinets is another purchase that is controlled. Years ago when steel was very critical, GSA issued a regulation which required their approval before purchases of steel filing cabinets could be made. Although steel is now plentiful, the control over the cabinets is still exercised, mainly for the reason that they have found any number of steel cabinets which were stored away when they should have been put into use. In other words, they weren't receiving maximum utilization. For this reason, it is necessary that we certify now, to GSA, that there are no steel filing cabinets available now for redistribution. This, of course, creates quite a problem in the purchasing of filing cabinets.

There are other items that are controlled by the GSA as well as the Department. We have in mind, in particular, the purchase of motor vehicles which are purchased by GSA; refrigerators and water coolers which must be obtained from the GSA Chicago office. Printing equipment cannot be purchased unless it has the approval of the Joint Committee on Printing. Executive-type furnishings, duplicating equipment, except for replacement purposes, require the approval of the Department. Standards have been established for various items such as motor vehicles, manual and electric typewriters. We must recognize all of these elements.

As you know, GSA has many supply centers. No doubt you folks are wondering why it takes so long at times to obtain various common items of supply when you could just go around the corner to a local store and obtain them just in a matter of minutes. GSA has established a number of warehouses throughout the country in which are stocked many, many items that are available at low cost. Regulations require that we procure our needs from GSA. In order to do so, we must plan and schedule our needs well in advance of actual use and submit requisitions through the appropriate channels where they may be processed by the GSA supply center. Ordinarily this should be done on a quarterly scheduled basis. If the amount regularly falls below \$25, consideration should be given to developing a schedule whereby you would submit a requisition every six months, or even on a yearly basis if the \$25 limitation cannot be satisfied on a schedule basis, then you are permitted to purchase items locally. There is another exception which would permit you to purchase articles locally and that is when the article is non-repetitive and could not be anticipated. In other words, your needs are not susceptible to planned requisitioning.

We know that deliveries from GSA supply centers have been slow. There has also been an improvement in this area. As a matter of fact, to improve this service, GSA has had the assistance of some merchandising experts and we understand that sometime in the near future, the GSA delivery's aim is to make delivery within seven days from receipt of the order. That is still forthcoming.

The other step in the constant effort to render a better supply service to all activities in our service area is use of the blanket purchase order technique. Some of you folks may not be familiar with this purchase arrangement. In brief, a blanket purchase order is issued by the ARS Business Offices (Regional Business Offices and Administrative Services Procurement Branch in Washington, D. C.) upon request in a definite amount to a vendor to cover a general class of commodities or services for a definite period, not to exceed a quarter, generally within a fiscal year. This form of procurement is at its best for the day-to-day "pick-up" items such as non-common items of hardware, paints, electrical supplies, etc., from the same vendor.

Blanket purchase orders also contain price advantages in that the procurement officer has the advantage of bargaining with all local sources for discounts in consideration for the purchase from one source of the small requirements of a field station, during the life of the purchase order. In addition to the immediate availability of supplies, provision may be made whereby the vendor will bill monthly; total billing, however, must not exceed the amount specified on the purchase order. Thus, its use reduces the number of paper transactions through eliminating placement of separate orders and payment of multiple billings.

The last item is the Standard Form 44 which we refer to as our field purchase order. This is a purchase form which should be brought to your attention. It is the one main tool which you should be concerned about. I don't know how many of you are familiar with the SF-44, but nevertheless, this is the instrument with which you should procure your items locally. This form is a combination of a purchase order and invoice. It is designed for use mainly for small over-the-counter purchases and would generally be used for purchases of items, such as hardware, minor repairs to your automobile, truck or farm machinery.

The form can be prepared at the time of the purchase. Recently, in view of a recommendation made by the Task Force, GAO General Regulation No. 134, dated March 11, 1957, and GSA Circular No. 137, dated April 29, 1957, were issued to discontinue the requirement that invoices or bills submitted by vendors be certified, except when entering into contracts for transportation and accessories services. Therefore, the proprietor of the store with whom we now deal is no longer required to certify the bottom portion of this SF-44 form and the form can be admitted through channels to the paying office without any effort on the part of the proprietor. The SF-44 may be mailed if necessary, but mailings should be confined to the field station's normal supply sources.

In conclusion, we must, therefore, recognize that these regulations, restrictions, laws, etc. do exist and at times we are required, as you can now well understand, to go a little slow on certain transactions in order to meet the requirements of these regulations. We therefore urge that you contact the technician whenever possible who knows this area of procurement and solicit his advice and guidance in your daily operations, just as the cattleman would solicit a veterinarian's aid, advice and guidance in his operations in keeping a healthy herd of cattle.



## PROPERTY MANAGEMENT

by  
Mr. L. E. Harrover

More and more emphasis is being put these days on management of Government-owned property as required by the Federal Property and Administrative Services Act. This act is administered by the GSA; and the policies and procedures set forth in this act together with Department procedures establish ARS policy on the utilization of personal property, and it is absolutely essential that we follow it.

In ARS we have about 300,000 items of non-expendable property with a cost value of approximately \$36,000,000. As you can readily see from the amount of equipment on hand, it is a rather difficult job to have a good management program unless we practice it every day. While I do not know of any at the present time, we have been under constant surveillance of inspection crews of both GSA and the Department to make certain that we are following a good management program.

What does a good management program mean? Well, it means that if you have excess equipment, you should declare it as such to your respective regional office unless it falls into the categories which have to have division approval prior to such declaration. Items which require this approval are vehicles, farm equipment, office machines, and photographic and scientific equipment.

One of the first things these various inspection crews look for is equipment stored in basements and attics; and unfortunately too frequently equipment is found in such storage. Usually the defense of the official in charge is to the effect that a certain program was curtailed and consequently the equipment was not needed at the time but it was felt that it might be needed at some time in the future. Property should not be stored unless there is a foreseeable need for it in the near future.

In declaring excess property, it is most important that an accurate description and true condition be given. I mean by that that if it is in junk condition, put it so. One of our problems in the past has been receiving Forms AD-109, "Excess Serviceable Property," showing, for instance the condition of an excess desk as "O2" which means "Usable without Repairs." A desk so shown generally will be requested by some other division at some other location. When it is received the condition will be found to be near to "R-4", which means poor, or "X", which means junk, and it should have been disposed of at its original location as such. Movement of such equipment not only costs the taxpayer money in transportation but it also makes the recipient unhappy and he loses faith in any other lists which may be circulated.

A good property management program does not apply only to the disposition of excess equipment but it also applies to the acquisition of needed additional equipment or equipment for up-grading purposes from excess lists which are circulated throughout the field offices. In case of up-grading, the piece of equipment being up-graded should be declared as excess immediately upon receipt of the replacement item.

I recall an instance a few years back where we closed out an office having exceptionally good furniture. Another office nearby in the same state had exceptionally poor furniture. After the necessary clearances, we transferred the good equipment to the latter office, with instructions to declare excess its old equipment. I had occasion to visit this station fairly soon thereafter and found that the old equipment still had not been declared, the reason being, I was told, that the station had recently had new functions assigned to it and the new work was being handled on the new desks so that it would not be mixed with the old. You understand, of course, that there had been no additions to the old staff.

ARS has in its custody some 4,000 vehicles of various types, such as passenger-carrying vehicles, trucks, busses and one ambulance. Of the 4,000, approximately 1,300 of them are passenger-carrying vehicles; and you may be interested in knowing that of this 1,300, ADE has about 600. The standards for trading in passenger cars is 6 years or 60,000 miles, but a great many of our vehicles now being driven far exceed these standards. As you may know the largest number we can request in any year in our appropriation act is 25 percent of our existing fleet, and this limitation is set by the Congress. The amount of new vehicles we can acquire each year, therefore, is never sufficient for us to replace all of our vehicles which are over the standards. Consequently, many of our vehicles must be driven possibly 70,000, 80,000, or even more miles. Knowing this we should follow a rigid maintenance schedule which will assist in keeping our vehicles in good working order until such time as they can be replaced. Form AS-29, "Preventive Maintenance and Service Record," which we have been using for the past several years, was designed as an aid to the operator of the vehicle in a good maintenance program. However, Form AD-187, "Motor Vehicle Operation Record," has recently been revised by the Department to include a maintenance and inspection record which is to be used by all agencies of the Department in lieu of the various agency forms which are now in use. Our AS-29 will, therefore, be obsoleted when the revised AD-187 goes into effect on July 1.

I would like to speak just briefly on requests for authority to park Government-owned or leased vehicles at the employee's residence. Before requesting such authority, be sure the position warrants it and the facts necessitating such storage are spelled out in your application. 5 U. S. C. 78 (C) (2) is our authority for granting such storage and Department regulations require that all requests for storage shall include a full explanation of the circumstances that justify such storage or use as being essential for the efficient conduct of public business. Requests will be approved only where it is clear that (1) Government, commercial or private storage on a rental basis or public transportation facilities are not available within reasonable distances consistent with the official duties and responsibilities involved or will not provide service at hours when required or adequate protection to the Government property involved, and (2) the character of the employee's official duties are such that approval is necessary for the proper performance of his duties. Approval is also required for storage in commercial or rented private garages in the vicinity of employees residences.

The authorizations I have just referred to are not required in unusual instances in connection with field work when the need for such storage in very infrequent or cannot be foreseen and commercial storage facilities are not available. When there is a doubt in the mind of the official in charge as to whether authority is required, he should submit a request to Washington and if the facts presented show that authorization is not needed, he will be so advised.

You can't be too careful with a Government-owned vehicle. You never know when some person will notice the Government vehicle being used, say around 8:00 at night, on Sunday, or in some unusual place, and the first thing he thinks is that the vehicle is being used for personal reasons. And in come a letter to the Secretary's office. It's a safe bet that the vehicle was being used on official business but all such complaints have to be investigated. This requires a lot of correspondence between the employee involved and his superiors and in many cases a visit from an investigator for additional facts.

Some people may think I over-emphasize precaution in the use of a Government vehicle, but I know of nothing which can get you into trouble quicker.

The General Services Administration, as authorized by Public Law 766, 83rd Congress, and Executive Order 10579, is conducting motor pool studies and establishing interagency motor vehicle pools in various metropolitan areas throughout the country, where such studies indicate the operation of motor pools are both feasible and economical to the Government as a whole. To date twenty-one motor vehicle pools have been established and twelve additional pools are under study at this time. It is our understanding that the over-all program will eventually involve the survey of approximately 100 metropolitan locations and the subsequent establishment of motor pools wherever such operation is considered advantageous to the Government.

When an interagency motor pool is established, all Government-owned vehicles in the pool area must be transferred to the motor vehicle pool, unless specifically exempted by the General Services Administration. Accordingly, unless exempted, no ARS vehicles may be stationed in a motor pool area.

In regard to utilization of services available from the interagency motor vehicle pools, it is the policy of ARS to utilize the transportation services, for official purposes, wherever possible. However, where travel may be performed more economically or GSA pool vehicles are not readily available or use thereof is not feasible due to time element involved, official travel within local pool areas may be performed through use of commercial transportation services or, when authorized, by personal car or by taxicab.

## RECORDS MANAGEMENT

by  
Mr. Paul Wirth

Prior to 1949, there was little interest in records management, although sporadic efforts had been made to clean up accumulations of old records. In the absence of instructions and guidance, it was easier in the past to order additional filing cabinets to take care of the increase than to dispose of records no longer needed. The first Hoover Commission Task Force, in 1949, made a survey of the records-making and records-keeping practices of Federal Agencies and made certain recommendations. The result was legislation known as the "Federal Records Act of 1950". This made a records management program mandatory, and placed authority in the Administrator of GSA, who issues regulations, requires annual reports of records holdings and disposition, inspects agencies records, operates Federal Records Centers for the storage, processing and servicing of records pending their deposit in the National Archives or their disposition in any other manner authorized by law. Each Department was given responsibility for a records management program.

The initial emphasis was on the disposition of records (destruction, or transfer to Federal Records Centers or to National Archives) with some emphasis on filing.

One of the first steps taken by GSA was the requirement that all records be scheduled for disposal by June 30, 1954. Records disposition schedules may be described as time-tables made to assure the orderly movement of records from time of creation to final disposition. It is interesting to note that all records disposition schedules are prepared by first determining and separating those records which are of permanent value and which must be preserved, and then determining the length of time all other records should be retained, and where they should be maintained until destroyed.

The second Hoover Commission Task Force, in 1954, discovered that while it had been the intent of the first Hoover Commission that the Federal Records Act cover all aspects of paperwork, the term "records management" had been misinterpreted to mean the movement of records to storage and eventual disposal, with some emphasis on filing, and that despite the productive work of GSA and other Federal agencies, the misinterpretation definitely contributed to restricted results from the Federal Records Act of 1950. Rather than attempting to broaden the concept of the term "records management", the second Task Force selected the term "paperwork management" to signify the broader areas with which it was concerned, and defined the four basic elements as (a) correspondence, (b) forms, (c) reports, and (d) directives and instructions.

Agriculture has delegated responsibility for records management to each of the agencies. In ARS the program is being carried out by the Administrative Services Division. Responsibility for forms management has also been placed in the Administrative Services Division. We are now formulating a forms management program and expect to place it in operation in the near future. During the past six to eight months, a records analyst has been

assigned to the staff of each Regional Business Office. The emphasis at this time is on records disposition and the regional records analysts instruct field personnel in the application of disposition schedules and assist them in the disposal of the records. During this short period more than 165 field offices have been visited and 1,200 cubic feet of records disposed of. These regional records analysts are also responsible for furnishing whatever assistance is needed in effecting the transfer of records to Federal Records Centers and for determining need for and recommending improvements in records creation and records maintenance practices.

At the request of Roscoe Morgan, Administrative Office of the ADE Division, we developed and installed a filing system in the Fort Worth, Texas and Albuquerque, New Mexico offices. This has resulted in the cooperative development of a uniform file manual suitable for use in all ADE offices. It was sent to twelve representative field offices for comments and is now being put into final form for issuance. Assistance in installing the system will be furnished by the records analyst of each Regional Business Office.

New records disposition schedules have been prepared for ADE and AIQ and are awaiting approval by the Congress. Copies of these schedules will be furnished field offices as soon as available. The application of these schedules, after approval by the Congress, is mandatory.

GSA has announced a series of Correspondence Management Workshops to be scheduled as soon after April 1, 1957, as possible at Boston, New York, Washington, Atlanta, Chicago, Kansas City, Dallas-Fort Worth, Denver, San Francisco and Seattle. GSA will invite field personnel to attend these workshops and it is expected that ARS will be making an announcement on this subject in the near future. GSA also plans to schedule workshops in forms management and mail handling during 1957.

Field offices, of course, have certain responsibilities in this program. AM 250.4 defines these as (1) safeguarding records of continuing value, (2) making prompt and orderly disposal of records of temporary value in accordance with approved disposition methods, (3) advising RBO's as records in their custody meet prescribed standards for transfer to Federal Records Centers, (4) contacting the RBO for assistance or information relative to records management, including clarification of disposition schedules and records retention period, (5) submitting required reports to RBO's - these are principally the year-end Form AS-19 Report of Records Holdings and Disposal, and any penalty mail reports required under AM 263.3.

In conclusion, I would like to encourage you to use the records management services available to you from your RBO. They will be happy to serve you.

## Budget and Finance Policies, Programs, and Relationships

About 10 minutes ago Mr. Stephens and Mr. Kirkham were summoned to the Administrator's Office in connection with a rather urgent budgetary problem. This is typical of the hectic nature of the budget process. If you are engaged in this process, your time is really not your own. You are subject to instant call on matters which may need to be decided on almost a moment's notice. In the absence of Mr. Stephens and Mr. Kirkham, I will try as best I can to give you about the same information they would give if they were here.

The Budget and Finance Division is one of the three management divisions that report to the Assistant Administrator for Management, the others being the Personnel Division and the Administrative Services Division. Briefly stated, the major functions of the Budget and Finance Division are to plan and administer a budgetary and financial program to meet the requirements of all ARS activities. We help in the development of the annual budget estimates and in their justification before the Department, the Bureau of the Budget, and the Congressional Appropriations Committees. We establish the necessary controls on apportionments of funds and on obligations and expenditures under such funds, pay vouchers and payrolls, and maintain the records necessary to insure that we do not over-obligate the appropriations by Congress and to provide regular financial reports on the progress of our operations.

Our Division is organized in two branches - the Budget Branch under Mr. Kirkham, and the Finance Branch under Mr. Struttmann. Each of these individuals also serves as an Assistant Director of the Division.

To carry out its responsibilities, the Budget Branch is organized as follows:

- (1) An Estimates Section which is concerned primarily with the development of budget estimates or requests for funds, and their submission to the Department, the Budget Bureau, and the Congress.
- (2) A Budgetary Reports Section which is concerned with the preparation of various types of special budgetary reports and correspondence in response to inquiries from department agencies, members of Congress, representatives of organizations, and interested individuals.
- (3) An Allotments and Apportionments Section which handles the allotment of funds after they are appropriated and also follows through in obtaining those funds that come from outside sources such as trust funds, reimbursements, and other financing arrangements to carry out those activities which ARS conducts on a cooperative basis.

The Finance Branch is organized as follows:

- (1) An Accounting Systems and Fiscal Procedures Section, which is responsible for developing the accounting systems and fiscal procedures for over-all control of funds and uniformity of fiscal operations.

- (2) A Technical Services Section which renders technical assistance to program branches and to operating finance offices on unusual and difficult problems.
- (3) A Fiscal Reports and Analyses Section which reconciles records maintained by operating finance offices with central records and prepared consolidated fiscal reports.
- (4) Operating finance offices of which there are six. Four of these offices are located in and are a part of the Regional Business Offices, one is located in Washington, and we have a small office in Beltsville. These six offices conduct all the necessary day-to-day finance operations, including examination of vouchers, preparation of payrolls and accounting for funds expended.

In dealing with obtaining and expending funds for ARS activities, we are concerned primarily with three agencies of Government outside the Department of Agriculture. These agencies are the Bureau of the Budget, the Congress and The General Accounting Office. The Bureau of the Budget is a staff arm of the President, and is responsible for reviewing all appropriation requests made by the departments and agencies to determine whether or not these requests are in accordance with the President's program and to decide upon the amount of money which the Department and ARS shall request the Congress to appropriate.

The Congress, as you know, makes the final determination on how much is to be appropriated and for what purposes, and enacts the appropriation request into law. When an appropriation act is passed by both Houses of Congress, it is forwarded to the President and upon his approval the amounts provided are made available to the Department and ARS.

The General Accounting Office is part of the Legislative Branch and is responsible for auditing all Federal expenditures for legality. In addition, they have numerous responsibilities that bear on the financial and program operations of the Executive Branch. They prescribe principles and standards for our accounting systems and evaluate the systems after we develop them.

There are a few basic statutes to which I would like to direct your attention. The Constitution provides in Article I that "No money shall be drawn from the Treasury, but in consequence of appropriations made by law; and a regular statement and account of the receipts and expenditures of all public money shall be published from time to time." These provisions have been in effect since 1787. The provision for full disclosure of receipts and expenditures of the Government has undoubtedly been responsible for a record of financial management relatively free from outstanding instances of graft, fraud, or other similar difficulties.

A law which is commonly referred to as Revised Statute 3678 provides that, except as provided by law, sums appropriated shall be applied solely to objects for which they are respectively made and for no other. What that means, of course, is that if we have an appropriation made for brucellosis control and eradication, that money must be used for brucellosis eradication unless according to provisions of some other law, part of it may be properly transferred to and used for another program.

Another of our basic statutes is Revised Statute 3679, which is the so-called Anti-Deficiency Act, which provides that no Department shall spend in any fiscal year or involve the Government in any contract or obligation for future payment in excess of the appropriations made by law.

Section 1211 of the General Appropriations Act of 1951 applies the Anti-Deficiency provisions not only to appropriations but also to the quarterly apportionments and to allotments made under quarterly apportionments. The law tightened up in a very real way the provisions of the Anti-Deficiency Act.

There is also a law enacted in 1954 and usually referred to as Section 1311, which provides that no obligations against Government funds shall be recorded unless supported by documentary evidence. Adhering to the provisions of these various laws gives rise to a large part of the activity of the Budget and Finance Division.

#### Budget Development, Allocations, and Reports

The Budget Branch is engaged in a continuing cycle of operations throughout the fiscal year and is often engaged in two, and sometimes three, cycles at the same time. To illustrate, during the past two months we have been working on the preliminary budget plans for fiscal year 1959 at the same time that we were trying to obtain funds from Congress for the fiscal year 1958. In addition, we were at the same time reporting on our financial operations under 1957 fiscal year funds. These overlaps in the cycle of planning, securing funds, and reporting on their use are a constant part of our work.

We start our budget estimates cycle each year with the Advisory Committees established under the Research and Marketing Act of 1946. There are at the present time 26 of these Advisory Committees meeting every year. For instance, there is a Dairy Research and Marketing Advisory Committee, one on Livestock, one on Feeds etc. There is a committee on most of the farm products in which ARS units are interested. These committees meet during January through March and make numerous recommendations for new work in their field or for revisions in existing work.

Each Advisory Committee recommendation is referred to the particular ARS division to which it relates. Along with these recommendations from Advisory Committees, we send a Temporary Circular calling for estimates from each division of their financial needs for the fiscal year one year removed. For instance, in April of 1956, we asked the divisions for an estimate of their financial needs for the year beginning July 1, 1957, this year being referred to as the fiscal year 1958.

The Temporary Circular calling for the estimates usually states certain policy considerations which must be followed. These policy considerations are established by Dr. Shaw, the Administrator. For instance, in developing the estimates for 1958, these were a few of the policy considerations announced:

- (1) No requests for additional funds should be made for lines of work for which increases were requested in the 1957 budget estimates.

- (2) Increases should be limited to items of highest priority.
- (3) Increases for utilization research should be directed to problems of reducing current surpluses.

The Division Directors, with the policy and procedure statement and Advisory Committee recommendations before them, review their current program with their staff to determine first if there is any work now under way that can be eliminated or curtailed. This applies particularly in the research area if the research reaches a point where a particular line of research looks as though it is not going to yield significant results. Also, the scientists may have reached a solution to a particular problem and the money available can then be redirected to some other important line of work. The Congress is always reminding us that such shifts should be made wherever possible within our available funds, and the process of redistributing funds to utilize them most effectively is occurring all the time.

In addition to the consideration that the divisions give to the Advisory Committee recommendations, there are other pressures, you might say, that are on us all. We feel many pressures and some of them are not strictly objective. We get pressures from farm, agricultural and industrial organizations. We get pressures from Congressmen. We get pressures from cooperating agencies and States and elsewhere, from all sorts of people who have a particular interest. Pressures are always with us and the division people are sensitive to them. I don't want to convey the impression that we do everything in a political way, that is not the case at all. We attempt to retain complete objectivity in our work. However, it's only reasonable to say that we are mindful of the pressures.

Another consideration that divisions must be aware of in developing their initial estimates is an over-all ceiling that the Administrator may place on the estimates of each division for that particular year. For instance, the Administrator in his policy statement may indicate that increases should not be in excess of 20 per cent or 25 per cent of the currently available funds. By setting such a limitation at a figure higher than anyone can expect to receive, the division people are given the chance to present their total case. In budgetary administration, we feel that it is a very helpful thing to allow Division Directors to come up with an estimate which they honestly believe is necessary in order that they can tell their complete story to the Administrator. In so doing, the most important problems are sure to emerge and receive attention. The divisions are required for each increase submitted to explain the problem, the need, where the work is to be located, etc. Wherever possible, such statements relate the increase requested to an Advisory Committee recommendation.

Each Division Director is given a hearing on his estimates before a committee composed of members of the Administrator's immediate staff. This committee hears over a period of several days discussions which back up the original written request for each division. The members of this committee then determine priorities for the items of increase and make recommendations to the Administrator. He may revise their recommendations or he may accept them without change. Whatever decision he reaches is the final decision for ARS on the amount that will be submitted as agency estimates.

At this point we begin the preparation of agency estimates. These outline our needs for the ensuing fiscal year within the limit set by the Administrator. They contain justification material explaining the need for the various increases contained in the estimates. A hearing is held before the Department budget committee composed of the Under Secretary, the Assistant Secretaries, and the Administrative Assistant Secretary. This committee goes over our budget plans and they ask a lot of searching questions. The discussions are quite frank and we are given a very definite indication by this committee as to their reaction on the estimates submitted. They determine the amount of the estimates which the Secretary is willing to forward to the Bureau of the Budget. In making its decision about what they are going to allow us, the Department committee is usually working within an over-all ceiling given to the Department by the Bureau of the Budget.

Based on the figures allowed by this committee, we prepare revised estimates, usually referred to as the Department estimates for submission to the Bureau of the Budget. Our Department estimates again contain justification material explaining in detail the need for any increases requested. In our hearing before the Budget Bureau examiners, the Administrator and the Deputy Administrators are the principal witnesses. After these hearings, the Director of the Bureau of the Budget acting upon the recommendations of his budget examiners, and working directly with the President, determines the amount of the estimate which will be forwarded to Congress in the early part of January.

These allowances are usually given to us sometime in November or the early part of December and the next month is spent by the Budget Branch in preparing a considerable volume of material to go into the printed budget. At the same time we are engaged in revising the material in the estimates which we sent to the Budget Bureau, in order to place them in shape for submission to the Congressional Committees on Appropriations. This material, as revised, is usually referred to as the Explanatory Notes.

The House Committee then holds hearings on our budget estimates and the Administrator and his Deputies are again the principal witnesses. The House Committee makes the determination as to the amount which they are willing to allow us and prepares a committee report outlining in some instances the reasons for their action and in other instances merely stating the amount allowed. This Committee Report along with the draft of the proposed appropriation bill goes before the House of Representatives and is enacted by the House. Sometimes the amounts proposed by the Committee are changed by the House. More often, however, the amounts remain unchanged.

We next have our hearings before the Senate Committee on Appropriations. In former years, the House bill was usually passed prior to the time the Senate Committee held hearings. In such a case the hearings in the Senate are usually related to the actions taken by the House. In more recent years, however, it has not been at all unusual for the Senate Committee to hold hearings prior to the time the House bill is passed. In either event the Senate Committee makes a determination as to the amounts which they are willing to allow. They prepare a Committee Report and amendments to the House bill for submission to the Senate, and again it usually happens that the amount approved by the Senate is the amount recommended by its Committee on Appropriations.

So now we have two bills, a House bill and a Senate bill, which almost invariably are not identical in their provisions. It is then necessary to have a Conference Committee appointed, usually consisting of members of the Appropriations Subcommittees from the two Houses. This Conference Committee attempts to resolve the difference between the two bills and in many cases recommends a compromise between the language and amounts of the two bills. If the Conference Committee's recommendations are accepted by both Houses, we then have an appropriation bill. This bill is forwarded to the President for approval and upon his approval it becomes law and the amounts available for the next year's appropriations become definite.

The appropriation act is usually approved before July 1 but this year, as you know, it has not as yet been passed and we are not sure just when it will be passed. (Note: It was finally enacted into law on August 2, 1957.) In such a situation, the Congress usually provides by means of a continuing resolution funds for the month of July or until time as the appropriation act is finally approved. So we are not entirely without funds on July 1, but may often be operating at a slightly lower level than we would be if the act had been approved by July 1.

After the act is approved, we are then faced with the problem of distributing the funds appropriated. This involves withholding a certain amount for administrative work at the ARS level. This withholding covers the cost of doing the budget, financial, personnel, administrative, and information work for ARS, and it also covers the cost of the Administrator's Office. After this deduction is made, the remainder of the funds, approximately 95 per cent of the total appropriated, is distributed to the program divisions in line with the representations made to the Congress as to the manner in which the funds would be distributed by programs. Allotment advices are issued to the Division Directors which provide them a firm amount within which to plan their program for the ensuing fiscal year. These allotments are broken down by quarters, the distribution of the total by quarters being worked out in consultation with program division personnel. After allotments are made, these amounts are further subdivided, usually by field locations, and accounts are established to record the transactions under the individual subdivisions.

To summarize the budget development process, we start out with a request for quite a large amount of money and we find out that it is trimmed at every stage of the budget process. Finally, we end up with a definite amount within which we must conduct our far flung and varied operations for the ensuing fiscal year.

I mentioned briefly that allotment advices are issued to Division Directors. This work is done by the Allotments and Apportionments Section who are also responsible for the securing of approval for apportionments of funds by quarters from the Office of Budget and Finance and the Budget Bureau. They are also responsible for reporting monthly on expenditures and obligations incurred, which reporting informs the Department, the Budget Bureau, and the Congress of the progress of our operations.

We also have a small group usually referred to as the Budgetary Reports Section which prepares any special reports needed to respond to specific inquiries made by this or other Departments, members of Congress, and other interested individuals or groups. This section also assists in preparing background material, charts and graphs used in the presentation of our estimates before the Budget Bureau examiners and Congressional Appropriations Committees.

Fiscal Operations and Procedures

by  
E. L. Struttmann

In the Finance Branch, we are concerned with the payment of vouchers, the payrolling of ARS employees, the recording of these transactions and the preparation of monthly reports showing the status of all ARS funds.

The Budget and Accounting Act of 1950 sets the framework for most of our activities. This Act provides for improvements in accounting methods and places upon the head of each agency the responsibility for establishing and maintaining adequate systems of accounting and internal controls which conform to principles, standards, and related requirements prescribed by the Comptroller General. Prior to the passage of this Act, the Comptroller General's office, usually referred to as the GAO, took a much more active part in the development of accounting systems - after the passage of the Act, most of the responsibility for accounting systems was placed upon the individual agencies. This was in recognition of the fact that, to be effective, an accounting system must suit the peculiar needs of the agency in which it is installed.

The Budget and Accounting Act provides that the accounting system should be designed to reflect the following:

- (1) Full disclosure of financial results of Government activities.
- (2) Adequate financial information needed for management.
- (3) Reliable information to serve as a basis for preparation and support of budget estimates.
- (4) Effective control over the accountability for all funds, property, and other assets for which the agency is responsible.

The Act also provides that the GAO will audit our accounts to determine the extent to which our system meets the above requirements and to determine that our financial operations are conducted in a legal manner. The Act also provides that the Comptroller General, the Secretary of the Treasury, and the Director of the Bureau of the Budget conduct a continuous program for improvement of accounting and financial reporting in the Government. During the current fiscal year, the work of the Budget Bureau in this regard has been materially strengthened. This was done in recognition of the fact that the responsibility for developing improved procedures should be in the Executive Branch instead of in the GAO which is considered an arm of the Legislative Branch.

To carry out its responsibilities, the Finance Branch is organized as follows:

- (1) An Accounting Systems and Fiscal Procedures Section, which is charged with the responsibility of developing the accounting systems and fiscal procedures for over-all control and uniformity of operations.
- (2) A Technical Services Section which renders technical assistance to program branches and to operating finance offices on unusual and difficult problems.
- (3) A Fiscal Reports and Analyses Section which reconciles records maintained by operating finance offices with central records and prepares consolidated fiscal reports.
- (4) Operating finance offices of which there are five, including the Washington Finance Office. These five offices conduct all the necessary day-to-day finance operations, including examination of vouchers, preparation of payrolls and accounting for funds expended.

The accounting system for ARS is on an obligation basis, i.e., it records charges against appropriated funds at the time an order is placed, services are received, or any other action is taken which would legally commit the Government to pay out money. Monthly reports on the status of funds which are rendered to the Budget Bureau and the Congress are also required to be on an obligation basis, since appropriations are made on this basis.

Perhaps the best way to give you a clear picture of our work is to relate it directly to the activities of your division. There is available for the work of the ADE Division during the current fiscal year a total of approximately \$26,000,000. Assuming that appropriations remain at this level for the ensuing year, sometime around July 1 the Department will receive a notice that the 1958 funds for your division are available in a specified amount. When this notice is received, Dr. Shaw will allot the funds to Dr. Anderson, with an indication of a distribution of the total amount by quarters of the fiscal year. This distribution by quarters is usually agreed on in advance between the Budget Branch and the ADE Division.

Based on approved operating budgets previously submitted to the ADE Division by State and Territorial ADE offices, these funds will be subdivided by regions so as to make available in each regional business office sufficient funds to carry out ADE activities in all the states embraced in that region at the level approved. These funds are further subdivided between regular salaries, fee testing salaries, indemnities, travel and station expense.

As payrolls are paid and vouchers for travel, indemnities, and other types of expense are sent for payment, they are recorded on allotment ledger accounts set up for each of the subdivisions mentioned above. Copies of these allotment ledger sheets are furnished to the Division in Washington at the end of each month for checking against the summary reports forwarded to the Division by the State ADE offices. In this way errors can be detected in either the formal accounts maintained in the RBO's or the informal accounts maintained by the ADE offices.

While this may seem to be a duplication of effort in that two sets of records are maintained, we have not as yet been able to develop a system which would eliminate the need for keeping records at the point to which obligations are incurred. There are several ways in which we might move to eliminate this duplication. Unfortunately, each alternative we have considered to date involves a more, rather than a less costly operation. We are still working on this problem.

As the year progresses, there will be changes in the extent, size, and timing of the ADE program in individual states. If these changes involve increases in the total for one region and decreases in the total for other regions, your Division shifts funds from the subdivisions in one region to the subdivisions in another. The need for such shifts is determined by the Division, based on an analysis and appraisal of the biweekly and monthly reports submitted by the state offices. You can see from this how important it is that the state offices keep the ADE Division continuously informed of significant changes in the size and timing of their programs.

Major dealings of ADE personnel with the finance sections of the RBO's will relate to the following:

- (1) Submission of time and attendance reports used as the basis for payrolling regular employees. Your check will usually be received not later than the second Thursday after the close of the pay period.
- (2) Submission of completed BFD-95's used for payrolling fee basis veterinarians.
- (3) Submission of requests for travel advances.
- (4) Submission of reimbursement vouchers for travel expenses.
- (5) Forwarding of those invoices for supplies and materials which are received in the state offices.

Of course, if you are working in the field, you will not be involved in certain of the items I have enumerated, such as the BFD-95's for fee basis veterinarians, as these are handled from the state offices.

Perhaps some statistics would help to give you an idea of the size of the financial operation performed in the RBO's and the WFO. We payroll approximately 14,872 regular employees, 954 part time employees, and 3,914 fee basis veterinarians each pay period. In the case of the fee basis veterinarians, the payroll is actually prepared at the state office and is then verified and scheduled for payment by the appropriate regional business office.

On payrolls for regular employees, there will be deductions from salaries for such things as Federal withholding tax, retirement, insurance, FICA, State income tax, and in some cases for quarters furnished. Visualize 26 payments per year to 19,740 employees, some of the payments involving as many as six deductions and you will have some idea of the problem of balancing these figures (and they must all balance to the penny) at the close of each calendar year. These figures must be in order that the W-2 which you use in preparing your Federal and State income tax returns can be furnished you by January 31 of the next calendar year. An integral part of the payrolling operation is the maintenance of your leave record, which is carried forward on each successive time and attendance report.

Around 325,000 vouchers are forwarded for payment each year. These include indemnity vouchers payable to farmers, travel reimbursement accounts, payments for supplies and materials furnished, etc. Each of these vouchers must be audited for correctness and legality before it can be forwarded for payment. The audit of very complicated travel accounts can sometimes involve considerable effort and time on the part of a voucher examiner. If there are items on the account which can not be passed for payment, the amount claimed is reduced accordingly and a preaudit difference statement is furnished the traveler to explain the difference between the check which he receives and the amount which he claimed.

Approximately 1,500 seperate subdivision accounts are maintained to cover the activities of all the divisions of ARS. You will recognize from the latter figure that many of our divisions, primarily the research divisions, break their subdivisions down in much greater detail than is true in control programs of the type handled by your division.

Just to summarize these figures, we:

- (1) Payroll almost 20,000 employees.
- (2) Pay about 325,000 vouchers annually.
- (3) Maintain approximately 1,500 separate accounts in which to record payments made to employees and the general public.

## GETTING THINGS DONE THROUGH PEOPLE

By Dr. C. D. Van Houweling

It is a pleasure to have this opportunity to speak to you today, and I know the other panel members join me in expressing our pleasure at this opportunity.

Congratulations to each of you, who, because of the ability you have demonstrated as supervisors, have been chosen to receive special training to develop your capabilities as a leader. During this period you will meet and work with men who have already demonstrated their ability to do what you will be expected to do after completing this training. Thus, you will have invaluable opportunities during this time to learn and develop as a leader.

We hope our session this morning will help you to take advantage of these opportunities. You will be provided the broad outline of what effective administration consists of and you may pick up many fine points to use in building upon this foundation.

You have been recognized to have potential to develop as administrators and supervisors, yet I would hazard the guess that your education and training as qualified veterinarians have not equipped you as well as you'd like for such service. It has been quite generally believed that some people had special abilities which made them good supervisors, administrators, or managers, and that, because of their natural characteristics, they rose to the top in managerial positions. Again, I would wager a small amount that each of you shares this conception, and if pressed to say why you had been selected for the special training to develop you as an administrator, you would have difficulty in listing your qualities or characteristics which have singled you out as men of promise who should receive additional training for assuming roles as administrators or managers.

I am frank to admit that, until about six months ago, I felt the same way. In fact, when I heard of a scholarship being offered to Government employees to attend a course on management, given by the American Management Association, it was not too clear in my own mind as to just what the course would cover. We in Government-- and particularly in the Department of Agriculture and ARS-- have singled out the administrative functions, commonly referred to as housekeeping functions, and placed them in the realm of management. Thus we have an Executive Assistant Administrator and we have administrative officers in the divisions who are commonly referred to as "the management people."

Perhaps you can realize then, why I was surprised when I found that industry was referring to all types of supervision and administration under the general heading of management, and that managers were considered to be persons who had one or more people under their control whom they supervised,

directed, and led in the conduct of any job, whether it was producing wire, selling life insurance, selling phonograph records, or hauling freight. This then opened up a whole new vista to me as to what management really is, and what managers are.

When Larry Appley, the President of the American Management Association, gave to those of us in the management course the definition of management as "getting things done through people," I think you can see what I mean. And I was to learn that we as managers in Government were not relieved of all management responsibilities by virtue of the fact that we had a management unit in our agency. True, we have specialists in the field of personnel, and more particularly in the field of personnel development and training. And we have budget and fiscal people who have the job of assisting us in keeping proper account of our funds, the rate of our obligations, and the proper accounting procedures. But we are not relieved of the responsibility for supervising and developing people, the accountability of funds, the proper procedures for accountability, and further management, by virtue of the fact that we have so-called management people at the level of ARS in the divisions and in field stations. This is another phase of our total program for which we cannot fail to accept responsibility and which we have to accomplish again through people.

I was surprised, too, to find that many people were talking about the science of management. Also, many people are coming to believe that there is a science to management and that not all managers, even highly successful ones in high positions in business and government, are not just "flying by the seat of their pants," that there are instead certain fundamentals in regard to managing that can be outlined and are essential for the most effective and efficient administration of business or government. Some of these essentials are not formally recognized by an organizational chart or such other techniques as job descriptions, appraisal forms, etc. In practically all instances, however, efficiently administered organizations have incorporated these elements of good management even though it is informal and perhaps even unintentional. Therefore, we would like to lay out for your consideration some of the essentials for effective administration.

This might be referred to as a "plan of management," "planned management," or a "program of management," or a "Method of managing." It is different and orderly way of doing what we are now doing.

You've all heard of the elements of good program and characteristics of a good administrator. I hope we can show you how these can be integrated into good management or efficient administration. Terms such as Policy, Objectives, Procedures, Plan of Action, Personnel, Supervision, Responsibility, Delegation, Methods, Control, Organization, Systems, Principles, Results, Rewards, Incentives, Motivation, Budgets, Participation, Coordination, Time Table, etc., are the jargon of these people who have made a study of scientific management. They are as much a scientific or professional language as we have in medicine or in the other sciences.

The No. 1 and most important element of effective supervision is people. Let me repeat: management is getting things done through the efforts of other people. As I said in the beginning, each of you has already had supervisory experience and has demonstrated ability. You will find, however, that as your responsibilities increase as a supervisor--and they invariably do as you progress upwards in our organization--you will have to rely more and more on other people. Some of you that have progressed from area to district veterinarians found a difference in those two positions. The extent that you could take up matters with each subordinate or practicing veterinarian or even individual livestock producers was diminished and you had to rely on the area veterinarians under your supervision to do this "grass-roots" work for you. If during your training period or later in your career you find yourself serving as an assistant in charge of a station you will have just that many more people to whom you will have to look to get the work done. It then becomes important to consider, "How do you get other people to do what you want done?" You have the responsibility for getting the job done--you can't do it all yourself so you have to rely on others. In this connection, it should be pointed out that people are the most important asset that we have, and perhaps the most important part of management lies with the first syllable of the word. No matter how much money you may have for a program, if you don't have people to do the work or supervise the program it will not get done. So your job is to use the people that you have to accomplish the job that you are responsible for.

Management, then, is not the direction of things, it is the development of people. That means:

1. Take people as they are with the knowledge, training, and experience they have accumulated.
2. Develop them by increasing their knowledge, improving their skill, and correcting their faults. The success of any supervisory effort depends upon this ability to improve and develop people.

Try to think of any job you'll have to do that doesn't involve people and their development. Every policy written, every plan developed, every decision made, every program initiated, must be carried out by people.

Organizations must be considered and constructed, not as machines, but as a living element of human activity.

To get back to getting the job done that you are responsible for. How can you accomplish this? (1) By having an organization; (2) by having a plan; (3) by controlling and reviewing the work of people as the program progresses; (4) by improving your plan based upon experience; (5) by developing your people so they can do a better job of what they are supposed to do; and (6) by improving your communications so that everyone will understand exactly what they are to do and how they are to do it.

In this session you are going to have a discussion of effective organization. Suffice it to say that not only must you have an effective organization, but you must have a complete understanding of what the organization means. In other words, you must have organization clarification, so that everyone knows what he has to do, what he has to do it with, and to whom he is responsible for it.

A good organization is one which makes it possible for individuals to work together as effectively as they work alone. This is the only reason or purpose for it.

A poor organization results in (1) duplication of effort, (2) friction, (3) omission of responsibility; (4) politics and (5) jealousies, all of which create lost time and effort. Most individual problem cases are the result of poor organization. Usually the difficulty results from misunderstanding or confusion in regard to responsibility, authority, or relations to other people. If the organization is not sound, the people in it cannot perform properly.

Mr. Harris will talk to you in much more detail about effective organization, or organizing to do the job.

Things seldom just get done. Most accomplishments are the result of planning. Planning in our work is extremely important and it should include the best thinking that you can get from all levels of the organization. A plan should be built from the bottom up as well as from the top down. And as with organization, to be effective, it must be clearly understood to be carried out.

Planning without review of the plan, how it is working and how the work is progressing, is only one-third of the job in regard to planning, reviewing, and controlling. The review should include the measurement of progress against previously established goals, and an effort should be made to attempt to determine why certain goals were not met. As long as we are working with a limited amount of funds and a large number of people, it becomes absolutely necessary to control the activities so that we will not overoblige our funds and will not have people doing things they do now have authority for.

What should a plan include?

1. Policy formulation - may be determined others--i.e., brucellosis;
2. Objectives or goals;
3. Procedures; and
4. Assignment of responsibilities.

Planning and assignment of responsibilities should keep down the crises of operation and give the administrator more time for other planning. Don't judge how important you are by how often you sign your name or how many decisions you have to make every day.

How do you find time? Take time and save time. What would happen if you are sick or have to be gone for other reasons? The work will go on for a day or two.

Planning, then, is "Determining what should be done, where action should be taken, who should be responsible for it, and why."

Dr. Mulhern will discuss this subject of planning in much more detail for you. He will attempt to show you the need for planning, reviewing, and controlling, and I am hoping that he will add one other function, which we may call "feed-back." By this I mean feeding back into the plan the results of our review and control.

For people to do what you want them to do and expect of them, they must be able to understand what the program objectives are, what their assignment is, and how you want them to carry out their work. This comes under the general heading of communications. Communications is a very broad word which refers to all transmission of information from one person to another via spoken word, a letter, or memorandum, or through such audio-visuals as motion pictures, television, and other visuals such as films, posters, charts, etc. We want to have a little demonstration this morning in which we hope will show you that it is not always as simple as we might think to effectively communicate to others, at least by speaking to them.

(Here, members of the group participate in a demonstration conducted by the speaker, which illustrated the difficulty of conveying instructions by the spoken word alone. A member of the group was asked to describe the positions of five dominoes and the listeners were to arrange their own dominoes in the same positions according to his instructions. The listeners were not permitted to question the speaker, and the speaker could not use his hands to illustrate the position of the dominoes. Only one or two of the group were able to arrange the dominoes correctly under this system. Another member of the group was asked to arrange the five dominoes and describe their positions to the group. In this instance the speaker was allowed to use his hands, and members of the group were allowed to ask questions until they felt they were clear as to how the dominoes were to be arranged. This time practically all members of the group had all of the dominoes correctly arranged. The purpose of the demonstration was to illustrate that spoken instructions without the benefit of questions to clarify possible misunderstandings could not be depended upon to convey detailed instructions to listeners. It also demonstrated that, when listeners were given an opportunity to ask questions until they were sure they understood the instructions, they were willing to assume complete responsibility for the way in which they carried out the instructions; conversely, without the opportunity to raise questions, they were not willing to assume any responsibility, feeling that it rested entirely with the instructor.)

In addition to this demonstration on communication, Mr. Moser will give you a discussion on the fundamentals of effective communication, mainly through speaking and writing. In this regard, just remember that unless

people understand what they are to do and what you expect them to do, they can hardly be expected to do it.

Since people are the most important asset any organization has, we should give the most consideration to personnel. This consideration should not be limited just to supervision or direction or an annual efficiency rating, but should include instruction, development, appraisal, and of course encouragement and praise when deserved. Here again, there are techniques that can be effectively used in the supervision and development of your subordinates.

If you attempted to list all of the qualities and characteristics of a good supervisor or manager they would include:

(1) Loyalty; (2) character; (3) dependability; (4) sound judgment; (5) fairness; (6) ability to work with people; (7) ability to express himself; (8) energetic; (9) thoroughness; and (10) diligence.

Of all the qualities or characteristics that you can enumerate, there will be only one or two that aren't changeable. If he is a physical wreck we can't give him a new body. If he's a moron we can't give him a new mind, but those are about the only things about a man that can't change. All the others he can change, improve, develop, learn or acquire if he is willing and helped along the way.

Mr. Kern will discuss methods in some detail, and I am sure he will give you a great deal of information based upon his experience in this field in the Forest Service. It is in this field that I feel that we are not nearly as strong as we should be. Programs such as this one in which you are participating are excellent. We have a fine orientation program for new employees, and I am sure that our on-the-job training does much to instruct and develop our employees. But I am sure that a willingness is needed on the part of all of us who have positions of responsibility with subordinates to take more seriously our responsibility in the development of such people to make them more productive, more capable staff members, which of course results in advantages to the Government as well as to the employees.

With this introduction I would welcome questions on your part, and after the discussion period we will proceed to the next panel member.

Attachments

A MANAGEMENT FORMULA \*

I. Organization Clarification

1. Functions to be performed
2. Authority to go with functions
3. Relationships with others

II. Standards of Performance

1. Conditions that will exist when functions are satisfactorily performed

III. Review and Appraisal

1. Periodic comparison of complete individual performance with the standards
2. Determination of individual potential

IV. Action to be taken

1. Help required to correct weaknesses in performance
2. Specific development program to realize individual potential

V. Source of Action

1. Immediate supervisor
2. Company specialist
3. Outside source to be brought in
4. Outside source to which to go

VI. Time schedule for action

1. For individuals
2. For groups (meetings, conferences, classes, etc.)

VII. Incentive and Rewards

1. Non-financial
2. Financial

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## BASIC PRINCIPLES OF MANAGEMENT\*

### MANAGEMENT

#### A. Planning (Policy Formulation)

1. Objectives
2. Procedures
3. Responsibilities

#### B. Controlling

1. Organization Structure
2. Immediate Supervision

### THE EXECUTIVE FUNCTION

Determine what people are to do

Select most qualified people to do it

Check periodically how well they are doing it

Find methods by which they will do it better

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### 10 DEMANDMENTS\*

1. What am I to do?
2. What am I to accomplish by what I do?
3. How can I tell for myself when I am doing it well?
4. What methods must be followed? Where am I on my own?
5. Am I fully responsible? If not, under what circumstances must I get clearance, decisions, advice?
6. Whose work does mine most closely affect? Overlap? Conflict with?
7. Where do their responsibilities begin and mine leave off? Do they know where my work begins and theirs leaves off?
8. To whom am I accountable for results?
9. What resources can I draw on? Men? Money? Time?
10. How does what I do help the company(ARS) get its job done?

## ORGANIZING TO DO THE JOB

by  
Mr. R. B. Harris

Effective organization is essential to the success of any undertaking; whether it be a church, school or community function, a business venture or a governmental program. Consider for a moment the nation-wide fund raising campaigns of the Red Cross, the United Givers, the March of Dimes, among others, and consider also the youth programs of the Boy and Girl Scouts, the 4-H, and the Future Farmers. I think all of us will readily agree that these campaigns and these youth programs are, by all reasonable measures, eminently successful. Why are they? You know the answer as well as I. They are effectively organized. And they have to be. They must rely largely, if not almost entirely, upon voluntary unpaid workers to accomplish their objectives. That is a real test of organization, achieving nation-wide objectives with voluntary help. Did you ever try to get an adult, or a group of adults, to do something for nothing?

You are supervisors. You have responsibility for the work of others and are to be tested to determine whether you are ready to take on larger responsibilities. Among the considerations to which you must give attention--and which will be ever-present throughout your supervisory career--is that of how best you can arrange and maintain the organization you lead in order to carry on effectively the work for which you are responsible.

The process of organizing will present problems. These will range from the comparatively simple to the quite complex. Fortunately, there are certain basic principles on which you can and must rely in attacking these problems and in shaping and maintaining any organization you head, if it is to be a successful one. In all probability you will find that those problems which loom largest will be problems of human relations. You may plan with great care, you may define assignments with clarity, you may delegate authority and you may exact performance, but each and every one of these and the other things you do, will in some way be conditioned by the very fact that human beings are the only means through which you can get a job done. These human beings will differ greatly in experience, in ideas, and opinions, judgments and capabilities, but it is they who make up your organization -- it is they and their strengths and weaknesses which you must keep always in mind in planning, establishing, and reshaping your organization, for it is really they and not you who will ultimately make it succeed or fail.

It will be readily apparent to all of you that there is no such thing as a "perfect organization." Because of that fact, it is one of the basic responsibilities of management, of which every supervisory employee is a part, to develop the form of organization that is best suited to the conduct of the program of work under consideration. It is also the responsibility of management to adjust that organization as it becomes necessary so as to assure that it carries out its assigned mission in an efficient,

effective and economical manner. It, therefore, follows that no organization can be permanent. It will have to be adjusted and reshaped from time to time as new requirements arise and new goals come into being. Therefore you, and those in the supervisory jobs below and above you, must remain constantly aware of the importance of taking a look periodically at what is being done, and the need for changes to be made. Unless we do that, and because we are all prone to become satisfied with existing situations, to withdraw into our own immediate environment, we tend to lose our perspective, and at times lose sight of our goal.

As to the structure of the organization--there is no single correct form. The simplest one is that of the work unit in which all of the employees report individually to a single supervisor. This form has its usefulness, but is limited to relatively small undertakings. As a number of workers increases, so do supervisory and other responsibilities of the unit head until the point is reached when he finds it necessary to separate his organization into two--three--four--or more parts--for supervisory purposes, if nothing more. There are, of course, numerous variations of organization. The ARS is an adequate illustration of a more complex form. Here--all of the programs of the Service are distributed among some 21 operating divisions. In addition, we have three management divisions, four regional business offices, and several staff groups which carry out management, business and other functions in support of the substantive programs. The form of your organization will, therefore, depend on several factors which, in themselves, will vary from situation to situation, the nature and scope of the work to be done, the financial and physical resources available to get it done, the number of people required to staff the activity, and the nature of training, experience and skills they must have, whether the work is to be carried out at one or many locations, being among the more important. Regardless of the form decided upon, you should consider the following principles in its planning and development.

LEADERSHIP - No organization should be organized around a single leader. Instead--leadership should be provided at every group level in the organization. The reason for this is simple--we strive toward reasonable stability and continuity--and unless leadership is provided at the levels where it is required, serious upheavals can occur as top leadership changes.

RESPONSIBILITY - There are two types of responsibility, line responsibility and staff responsibility. Line responsibility you know as that which resides with the operating officials. They are the persons who issue and receive instructions and work at the tasks relating directly to the functional objective of the activity. The action taken with respect to how things should be done is decision-making in nature. On the other hand, the staff responsibility or function is simply one of planning and advising, and assisting the head of the organization in carrying out his responsibility. The very small organization has no staff because the head can personally attend to matters of a staff nature. In larger organizations, however, demands upon the top man are many and his time is limited. He is, therefore, compelled to utilize personnel who have the time he lacks to consider and advise him on the many matters which come to him, thereby relieving him of the burdens of judgment and evaluation. Based on the work of the staff people, he can then make the decisions that, as head of the organization, he alone can make.

UNITY OF COMMAND - Another consideration to bear in mind is "Unity of

Command." No person should be required or expected to report to more than one supervisor. When he is, his performance and effectiveness will sooner or later, be reduced. In an effort to follow the instructions of one supervisor, he will, inevitably, find himself in conflict with the instructions or requirements of the other. He will be uncertain at times as to the direction in which he should proceed and will, consequently accomplish less work. He may eventually find it expedient to disregard the instructions of both supervisors and to proceed on his own. And the result is, of course, loss of supervision and control of the employees. This is really one of the basic principles of organization and human relations.

SPAN OF CONTROL - The principle of span of control is based on the premise that the number of people reporting to one individual should not exceed that number to which he can give adequate supervision and direction. This simply recognizes that there is a limit to the number of individuals a supervisor can effectively control. The supervisor who observes this principle finds himself capable of giving adequate attention to subordinate functions and activities. When the demands of his job are beyond his ability to handle, he calls upon an assistant or assistants to help him take over and give direction to subordinate functions. There is no magic number which represents the maximum span of control. The number will vary with the peculiarities of each situation. The head of a technical or scientific program can adequately supervise a lesser number of people than can the foreman of a labor force. This is true because of the nature of the work and of the problems that arise and the necessity for maintaining an integrated or coordinated activity so that each cog will mesh properly.

There are several factors which will determine the limits of one's span of control.

1. The routine and repetitive nature of the work.
2. The similarity of the work of all employees within the work unit.
3. The extent to which subordinates voluntarily work together and coordinate their efforts.
4. The supervisor's proximity to subordinates.
5. The extent to which authority for control of operations and implementation of policies can be delegated.
6. The amount of time that can be devoted to internal operations of the unit.
7. The stability of the program of work.
8. The extent to which supervisor and subordinates in the organization are generally able to manage their affairs confidently and on an individual basis.
9. The existence of a common bond of understanding between supervisor and subordinates.

HOMOGENEOUS ASSIGNMENT - In organizing any activity, it is important to create an homogeneous assignment of functions, which means simply that wherever possible functions which are closely related or interdependent are brought together under a single supervision. This has been applied particularly in the organization of the Agricultural Research Service. ARS has the responsibility, among others, for conducting national programs concerned with the control and eradication of livestock and poultry diseases and with the interstate movement of livestock and poultry. The responsibility for these programs is concentrated in one organizational unit--The Animal Disease Eradication Division--and under a single supervision. For day to day operating purposes, however, the Division organization is broken down on a disease or problem basis into sections, but because there is a single supervisory head, it still represents an homogeneous assignment.

RESPONSIBILITY AND AUTHORITY - Just as in the case of action and reaction in physics, in which with every action a corresponding reaction accompanies it, in a sound organization every assignment of responsibility should be accompanied by a commensurate delegation of authority, for the individual without authority is unable to discharge his responsibilities. You should, however, recognize a distinction. The delegation of authority to a subordinate does not relieve you of responsibility for the performance of that subordinate. The responsibility for the subordinate always rests with the supervisor, who, in turn, is responsible to a higher authority for the accomplishment of some segment of the over-all function. This responsibility can never be shifted to the shoulders of anyone else. Therefore as you delegate keep in mind the importance of reserving to yourself that authority which you find necessary to discharge the obligation to your superior of assuring him that you do have control of the work situation and of the performance of individual employees.

DECENTRALIZATION - We hear much about decentralization these days, both in the geographic sense and in respect to a single location. It is a well established principle having gained extensive acceptance in industry as well as in government. It means that, to the greatest extent practicable, authority and responsibility for action are decentralized to the subordinate units and individuals who perform the actual operations. There are several benefits to be derived from decentralization, the obvious one being that the administrative burden of higher level officials is greatly reduced, thus relieving them of routine duties and allowing them more time to devote to over-all matters and executive control. Decentralization gives responsibility, authority, and decision-making power to individuals who know the local situation and who, in theory as well as in fact, frequently are best able to decide what should be done. It also contributes to higher morale in an organization. We are all human beings and I think as a rule we have a rather well developed sense of responsibility. We like to know our boss has confidence in us and expects us to function as independently as he, in carrying out his responsibility, can permit.

If proper safeguards are established and maintained to insure that general policies are not violated and that standard procedures are followed, authority to make final decisions can be delegated to successively lower levels of organization. There are practical considerations, however, which will determine the extent to which delegation is desirable. Some of these are as follows:

1. Authority and responsibility cannot be delegated unless and until policies and procedures are spelled out to assure uniform administration.

2. Certain functions cannot be delegated because of potential repercussions if they are mishandled. These are matters of top-level importance.

3. The importance or size of a program; for example, the wide distribution of an appropriation to many different activities requires that the responsible official maintain very close scrutiny and control over expenditures for the simple reason that he never knows when it may be necessary to bail someone out. At any time a situation may arise which requires him to corral lapses.

4. If an activity is situated in an area geographically distant from the central point of control, there is more reason to delegate responsibility than if the activity were situated nearby.

5. If immediate or instantaneous decisions are needed, then authority must be delegated to the organization at the lowest practicable operating level.

6. Delegation cannot be accomplished if capable subordinates are not available to carry out the responsibilities.

CENTRALIZATION - Centralization is the concentration of authority and responsibility at a central point. It is practiced most frequently in administrative and business type activities, and in ARS to a great extent in research activities. In many instances it can be more effective than decentralization. It can promote economy in operation, improve worker efficiency, aid in bringing about improvements in work or performance, and reduce the number of subordinate operating units requiring supervision. But, bear in mind that in a centralized activity, control of operations must remain with the operating head because it is he who is responsible for getting the work done.

Centralization and decentralization both have advantages and disadvantages which must be weighed one against the other but the extent to which either principle may be adopted will depend on the nature and scope of the program, the environment in which it will be carried out, its political importance, and the necessity for top-level decisions.

COORDINATION - In order to achieve efficiency in any organization, there must be coordination. It is a practical necessity when several groups or individuals are separately engaged in similar, related or even identical work. They are apt to interpret plans, policies and regulations in different way. Obviously, what is needed is coordination to enable everyone involved to "speak the same language." This is the role of the supervisor. He interprets and clarified plans, policies and regulations, and promotes a common understanding through interviews with individuals or groups, staff meetings within the organization, personal contacts, and written procedures. In so doing, he maintains effective control of operations and assures that all employees are working toward the over-all objectives of the organization.

I trust I have been successful in increasing your understanding of some of the many factors which must be considered in the development of an efficiently operating organization. Let me emphasize these points: (1) There is no single correct form of organization. The form will vary depending on the size of the program, geography, the division of labor required and the availability of the right number of qualified people, the sufficiency of funds, and adequacy of resources with which to do the work, considerations of internal efficiency, physical resources, the political significance of the work, and, of course, its technological requirements. (2) No organization is static. Once it is established and begins to operate, it becomes a dynamic thing conditioned by internal as well as external influences. The human element makes it an imperfect piece of machinery which needs to be adjusted as ideas, perspectives, viewpoints and values change. Changing program objectives as well as needs will work their influence. Periodic reappraisal of functions and the manner in which they are being carried out will suggest the need for changes in program emphasis, in lines of supervision and communication, reporting relationships and the assignment of functions. Where the need is indicated, these adjustments should be made in order to retain efficiency of operation.

## OPPORTUNITIES IN SUPERVISION

by  
Mr. J. C. Kern

This morning I greatly appreciate your invitation to make some observations and point out some specific opportunities in the wide, stimulating field of supervision. Particularly, I wish to explore with you some of the opportunities which may be too simple and obvious for us to notice. These simple overlooked factors are many times of equal or greater import than those "which are too difficult and obscure for us to find."

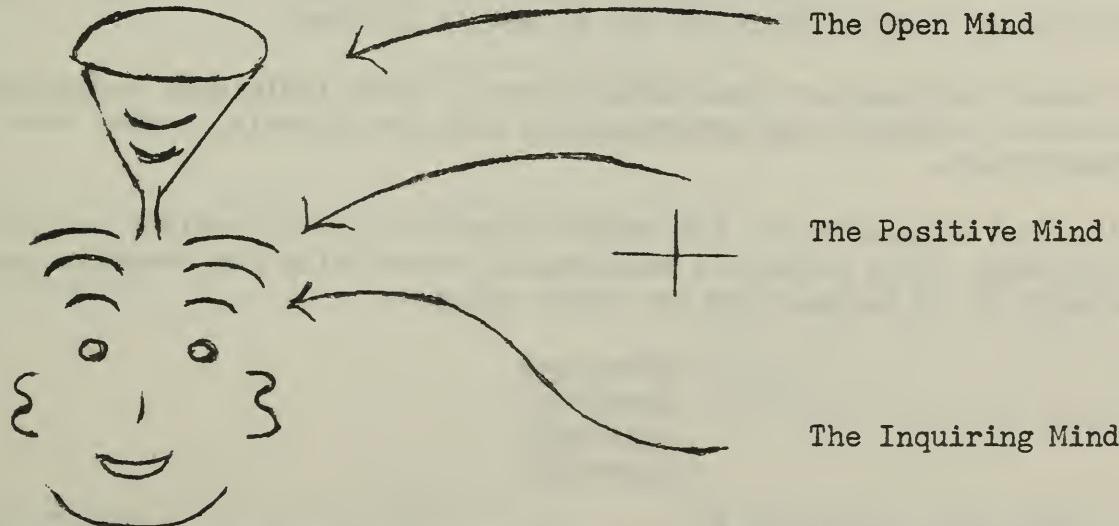
We're dealing with people. The big census board in the Department of Commerce tells us that there were, as of 12:15 P. M., July 9, 1957:

171,272,917 people in the U. S. - - - and that our population is increasing at the rate of 1 person every 11 seconds, based on:

- 1 birth every 7-1/2 seconds
- 1 death every 20 seconds
- 1 immigrant every 1-1/2 minutes
- 1 emmigrant every 20 minutes

People are with us in growing numbers and in growing breadth of individuality--they're all different. True, but possibly overlooked in planning and carrying out our supervisory duties.

As supervisors we can aid in encouraging 3 attitudes of mind within ourselves and in the folks we work with.



Communications, so ably pointed out by Mr. Moser, function most effectively when open minds are at work. The fellow whose mind says "we can do it" adds a positive force to progress. And the chap whose inquiring mind ponders the why's and whats and wherefore's of supervision, to improve that management process is worth his weight in gold. He more nearly, than not,

gets problems solved and understood more readily by all members of his team.

A great industrialist has said: "I have yet to find the man who did not do better work and put forth greater effort under a spirit of approval than would ever do under a spirit of criticism."

Some of these exploratory trails might help us in watching for clues with people right out on the job:

Don't know—lacks knowledge

Can't do—lacks skills and abilities

Don't care—lacks interest and incentive.

So much for a little background philosophy.

There might be some specific opportunities in supervising people-- -- "too simple for us to notice":

(1) Good day-to-day leadership and example to the man on the job. To this point Moorehead Wright, GE's Management Education Consultant says: "Ninety percent of a person's development is influenced by what happens to him on the job from day to day."

(2) The opportunity to clarify our understanding of these basic questions which directly involve supervision and supervisors:

a. What are the broad objectives of our outfit?

b. What is the specific job at hand? Why are we doing it and how does it fit into the program objectives?

c. What are my responsibilities and my team's mission?

Unless these questions are reasonably clear to each individual concerned, the direction, teamwork and progress of a unit can materially slow down or abruptly halt.

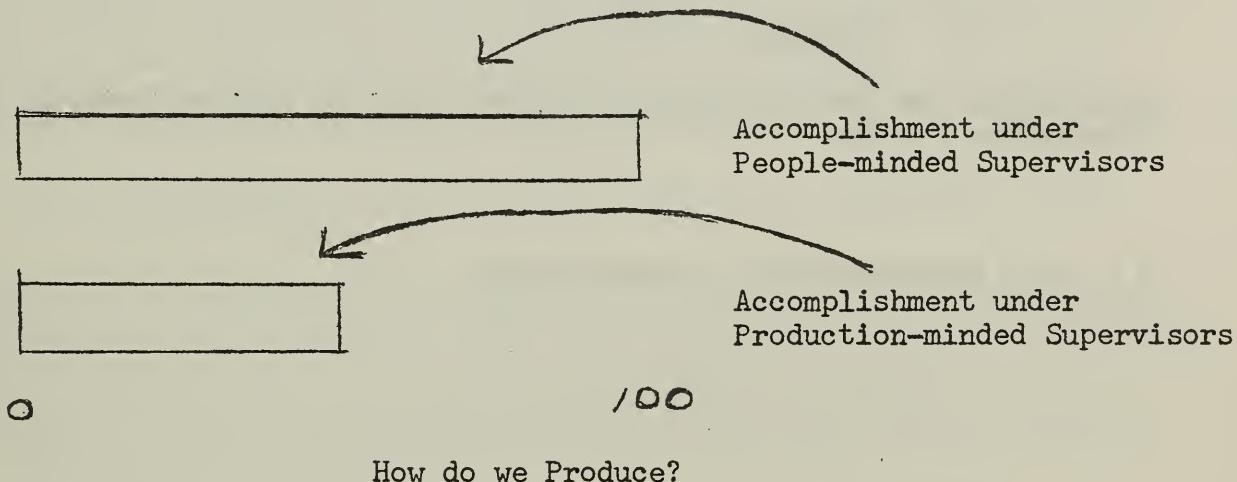
(3) Work standards are the prime targets of the supervisor and his unit's efforts. They present a challenging opportunity for practical usage, particularly if we screen them for these values:

Understood  
Specific  
Realistic  
Measurable

(4) The "measurableness" of a work standard gives us a fourth opportunity—to review job competence and evaluate overall performance. In the Forest Service we use a system of inspections to evaluate "how we're doing?" in specific fields of work. It is also our primary central process

to view and improve the effectiveness of our total operations. Perhaps the greatest contribution of this field and factual review is in marking the points on the supervisory trail where we can help people in their present jobs and help them to prepare for others. This means measuring the effectiveness of our supervisors as trainers of their people. It relates to what we said about work standards and work accomplishments---both quality and quantity. It looks for simple individual training plans for each man, and "bird-dog" follow-up on them.

(5) In summary, I think our greatest opportunity in supervision is in taking "Time Out for People." Is this sometimes too obvious for us to notice? Apparently so, for here's what five large national companies found out about production under "people minded" and solely "production minded" supervisors.



Taking "time out for people" will help us to ponder and pursue the best ways to aid them to develop as individuals. It can help to fill the gaps in knowledge, skills, abilities and attitudes which relate to:

What we actually do  
and  
What we're capable of doing.

Graphically, it might look something like this:

Can Do Level  
(Potential Capacity)

Doing Level  
(Current Accomplishment)

Development \*  
of the Man



"Pay-off" area to the man and his Service---where individual development plans help to give him significant success on his current job and prepare him for others.

"Foundation" area where supervisors help the man build up knowledge, skills, abilities and attitudes---requiring good day-to-day leadership and encouragement.

How Supervisors can HELP US TO DEVELOP \*

In scouting out some of these trails in supervision and training, I've found these references particularly helpful:

GUIDEPOSTS FOR SUPERVISORS  
USDA 1952

Also the "J" cards on:

Job Instruction Training

" Relations "

" Methods "

Many thanks for the privilege of joining with you and the Panel in this stimulating session.

\* A basic responsibility of supervisors.

COMMUNICATIONS IN MANAGEMENT  
(Administrative Communications)

by  
Mr. D. F. Moser

Communications is the human interchange of facts, ideas, opinions and impressions. Administrative communications is communications within a formal organization (commercial enterprise, government agency, etc.)

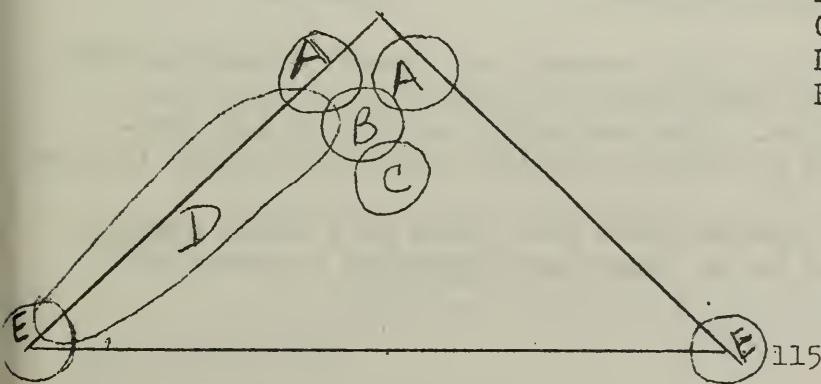
The general theme of this portion of the presentation this morning is the communications responsibility of middle management, with special emphasis on the future situations in which you gentlemen will find yourselves as you go further along in your conversion from professional veterinarians to managers and junior executives. This responsibility can be stated briefly in a sentence from Chester Barnard's book "Functions of the Executive":

"The first executive function is to develop and maintain a system of communications."

Administrative communications systems are developed and maintained within three identifiable frameworks. The first framework is the one established to govern people's official relationships within the organization--in other words, how people will formally communicate among themselves. This is recognizable as the organization structure, and is the formal framework for administrative communications.

The second framework is an informal one, which consists of the social structure of the organization. Modern organizations have become communities unto themselves, with true social structures of their own which often are as binding as any outside the organization. The social structure of an organization may be expressed in terms of behavior codes, sets of allegiances, castes or status symbols. People in the organization sense and act in accordance with the social structure, even though they may not admit its existence. Those who do not conform to the requirements of the social structure are usually eliminated -- often voluntarily, sometimes otherwise. The principal thought here is that the social structure is an informal framework which can effect (and possibly disrupt) the formal framework (the organization structure) established to provide for a system of administrative communications.

Illustration:



- A: dominant professional groups
- B: internal social clique
- C: internal clerical career group
- D: politically influential group
- E: non-dominant professional groups

As the illustration reveals, the formal framework (organization structure) and the informal framework (social structure) combine to form the third type of framework--the actual framework, which could be termed the organization's operating structure, and is the result of the effect of the social structure on the organization structure.

The principal involved in this framework-structure discussion is that the system of administrative communications, to be effective, must be based on the formal framework but should never be incompatible with the requirements of the informal framework. Ideally, of course, it would probably reflect the actual framework or operations structure, but this is not always possible. With that background, let's get on with discussing communications more directly.

There are five elements of communications:

- |                        |                       |
|------------------------|-----------------------|
| 1. Communicator        | (speaker, writer)     |
| 2. Act of transmission | (saying, sending)     |
| 3. Stimuli             | (order, speech)       |
| 4. Recipient           | (addressee, audience) |
| 5. Result              | (action, reply)       |

The most important thing here to remember is that the first four elements are all preparatory to the fifth, but all are absolutely essential to the fifth.

There are basically four forms of communications:

1. Verbal - speech
2. Written - letter
3. Pictorial - cartoons, movies
4. Symbolic - objects, actions, words
  - a. Objects - flag, rank insignia, wedding ring
  - b. Actions - grin, clenched fist
  - c. Words - "God", "Mother", "Free Enterprise"

Administrative communications characteristically have four directions: down, up, across and out.

<u>Direction</u>	<u>Typical Purpose</u>	<u>Typical means</u>
Down	To direct actions	Orders
Up	To report on actions	Reports
Across	To coordinate actions	Meetings
Out	To explain actions	Speeches

Our primary concern this morning is with downward and upward communications. These should always be considered together (simultaneously if possible), because of their reciprocal nature. They are truly reciprocal and automatically so, because one cannot be really effective unless the other is also.

It is fairly typical of formal organizations that there is a basic assumption in them that communications is an essentially downward proposition.

However, it is just as typical that most people in an organization spend most of their communications effort on attempting to communicate upward.

Illustrative attitudes:

Boss: "hard man to figure out"  
"very complex guy"  
"extremely busy person"

Subordinates: "people who do work"

However, and this may sound a bit paradoxical, it is probably true that the most effective way to communicate downward is to provide for meaningful upward communications. This is based on the idea that if subordinates can communicate meaningfully to you, your communications to them are effective. In order to make this possible, it is necessary to have both a systematic and spontaneous flow of upward communications. There are four basic types of desirable upward communications:

1. Reports on activity of subordinates - highlights of work, progress, achievements, future plans.
2. Information on unsolved work problems on which subordinates now need or will in the future need help.
3. Suggestions or ideas of subordinates on possible improvements in their work, their unit or the organization as a whole.
4. What subordinates think and feel about their job, their associates and the organization.

The first three of these types are primarily work-oriented, and may profitably be systemized through recurring reports, staff meetings suggestion systems and similar organized means. All of these are, of course, subject to both formal and informal improvement to make them more meaningful and effective. However, the fourth type is not necessarily work-oriented and is not easily susceptible of being systemized--even if it should be. For this type, reliance must be placed on the spontaneous nature of the communications.

Some benefits of an administrative communications system which provides for a systematic and spontaneous flow of upward communications are:

1. Superiors learn whether their downward communications are understood by subordinates.
2. Superiors learn whether their downward communications are accepted by subordinates.
3. Subordinates may participate in considering proposed action, thus better obtaining their understanding and acceptance.
4. Subordinates are encouraged to offer ideas of value to the organization.
5. Subordinates are afforded a recognized means of self-expression in the organization.

6. Superiors know what is going on in their jurisdiction.

However, there are a number of barriers which tend to prevent a free flow of upward communications. Some significant barriers are the following.

1. Authority, prestige and tradition in modern organization all oriented toward downward rather than upward communication.

2. The facilities and services available in modern organization favor downward over upward communication.

3. Superiors are often inaccessible to subordinates because of physical or organizational distance, critical differences in personal and cultural backgrounds, and separation by virtue of their relative status in the organization or social structure.

4. Superiors are often unwilling to be communicated to. Their general attitude and behavior toward listening may be negative. They may be imbued with the basically erroneous approach that "no news is good news." They may be defensive concerning their past actions -- everybody unconsciously resists communications indicating possible self-shortcomings.

5. Similarly, subordinates are often unwilling to communicate. Subordinates generally prefer to temper or withhold bad news. It could be stated as a principle that subordinates give superiors bad news only if they would catch hell if they didn't.

6. Superiors may fail to act on undesirable conditions previously communicated to their attention. If this failure is repeated more than once, it is highly probable that no more communications about undesirable conditions will be attempted.

7. Finally, communicating is time-consuming. However, the subordinate with free access to the superior can get answers to incipient problems, and thus eliminate heavier demands on the superior when the problems later become complex, emotion-laden or out of control. A superior freed of routine tasks and engaged in moulding a better organization will rank communications high and devote time to it, since communications is the nerve center of management. In contrast, the superior who acts alone and solves most of his unit's problems by himself will probably be too busy to emphasize communications.

In conclusion, the superior's basic problem is to successfully foster an atmosphere in which the organized or systematic communications will be meaningful, and in which spontaneous communications may flow freely. Generally, the best way to approach this problem (and there are no pat formulas for solving it) is through the progressive reduction of those barriers to effective communications which are organizationally necessary, and through continuous effort at complete removal of those barriers which are unnecessary.

## PERSONNEL ADMINISTRATION

Mr. J. P. McAuley's discussion on the organization and the functions of ARS as related to Livestock Regulatory Programs was given extemporaneously. Therefore, his speech was not documented for presentation in the Conference Report of the Fourth Veterinary Administrator Development Program.



## THE REGIONAL BUSINESS OFFICES

by  
Mr. P. K. Knierim

In looking at the Regional Business Offices and their relationship to other entities of the Agricultural Research Service and its administrative "environment" in general, it might be well if we divided our consideration into three parts. First, their origin and evolution and their growth both in size and in the scope of their responsibilities; second, their structure and operations; and, third, the services they render.

### I Origin and Evolution

The regional business offices were established formally by Dr. Shaw with the issuance of Administrative Memorandum No. 101.1, Supplement 30, dated May 27, 1955; just a little over two years ago. That memorandum designated the location of the four regional offices -- Albany, California; Minneapolis, Minnesota; New Orleans, Louisiana; and Wyndmoor, Pennsylvania. The Albany and Wyndmoor offices are located in the laboratories of the Western and Eastern Utilization Research and Development Divisions, respectively, and the Northern and Southern offices have rented quarters. In that memorandum, also, the States within each region were delineated.

The final paragraph has a statement of policy with regard to the regional boundaries which has an effect on quite a few of the decisions which have been made. Dr. Shaw said "In approving ARS regionalization plans, the Department indicated that all ARS business activities should conform to the regional boundaries." In accordance with that requirement of the Department, ARS has adhered to the regional boundaries without an exception which I can recall in the Eastern Region.

The operations of the regional business offices were begun on July 1, 1955, with an almost overwhelming workload and few personnel; lots of problems and few of the answers. Initially, we were concerned with purchasing, property accountability and all the related activities we call Administrative Services and the keeping of the financial records and payrolling virtually all field employees other than those in the former BAI units. So far as personnel was concerned, our activities were limited to "servicing" the field units of the former Bureau of Entomology and Plant Quarantine and the Bureau of Agricultural and Industrial Chemistry. Lest anyone think we felt this authority limited, I'll hasten to add that it was the middle of the summer and folks were being hired in droves for a month, a week, a day and even for a few hours. The methods used for employment varied considerably as did the procedures for informing us. Consequently, every day was pay day for someone and we just tried to get around to every employee once every two weeks!

Gradually we were able to cope with most of these problems though we still experienced "growing pains." As you perhaps recall, we began payrolling the employees of the livestock branches on about January 1, 1956 and undertook the actual preparation of these payrolls six months later.

In the meantime, delegations of authority in the fields of classification and employment were made first on a very limited basis and gradually increased until now the regional business offices are generally responsible for employment actions up through grade GS-13 and classification of grade GS-13 and below for the former EPQ, BAI and Chemistry units and for wage board positions in the other Divisions.

Just one further word before we leave the Personnel field. We believe the key "personnel officer" in any organization and at all levels is the supervisor. I sometimes think there are no duties so onerous or assignments so difficult or tedious that they cannot be carried out adequately and with good spirit if the supervisor is able to provide the incentive and leadership required. The poorest personnel "program" can be effective and the best ones fail if the supervisor is or is not equal to the situation. The personnel folks in the RBO's and here in Washington are specialists in their field but their most important function is that of supporting or "backstopping" the supervisor. We are very conscious of these roles of both the supervisor and personnel technician and any programs we develop or actions we take will be done with this concept of the supervisor's role as our base.

Beginning about January 1st of this year the personnel, procurement and accounting functions of the Plum Island Animal Disease Laboratory were transferred to the Eastern Regional Business Office and we very quickly became aware of the unique and perplexing problems with which the folks at that station are confronted.

This process of expanding the authorities delegated to the regional business offices is still continuing. This week, for example, we are beginning the billings and collection work for Meat Inspection and Animal Inspection and Quarantine Divisions. With this change, we are now handling virtually all fiscal activities in the field except the payrolling of the fee-test veterinarians. This does not mean there are no payrolling, accounting, procurement or personnel activities in the field stations. There is a lot of work in those areas being done in field offices and included in our major objectives should be: first, the development of the closest possible co-ordination between those offices and ours under the present procedures; and, second, a critical review of those procedures to assure that we are getting the job done with maximum effectiveness, a minimum of duplication of effort, and at the lowest possible cost.

In Administrative Services our activities likewise have been expanded. We have started a records management program, in which area we have been able to provide some help to several State offices of ADE. The real property officers are on the job in each region and this program will get under way actively this fall.

If you have ever been responsible for taking an annual physical inventory, you will surely be glad to know that our records were converted to IBM operation the first of this month. Consequently, the preparation of property cards and the typing of the annual inventory is now a thing of the past. Each of the business offices will arrange with field units for the taking of the physical inventory at the most convenient time of the year and will provide a listing of all property chargeable to the station. It will

still be necessary to locate each item of property so that certification can be made as to the fact that it is still on hand but we believe the new procedures will make this a much less time-consuming task for you.

While we are speaking about property, I would like to say just a word concerning automotive vehicles. In the Eastern Region we have about 700 automobiles, station wagons and trucks. Last year these vehicles were driven a total of over seven and a half million miles. Inevitably, there were a number of accidents, some of which we feel could reasonably have been avoided. The greatest loss we suffer in these cases is not in money or even in the unavailability of the vehicles as inconvenient as that may be. The injury or, as in one fairly recent case, the death of a valuable, highly-trained individual whose services are badly needed is the type of loss we can least afford. You men will have responsibility in controlling the use of vehicles and I would urge that you do everything you can to see that they are always in first class mechanical condition and that the drivers are competent and physically qualified to operate them. Also, it seems to me if we could get our folks who drive cars to show the same courtesy as they do even when hurrying along a crowded pavement we would be a long way toward reducing the number of accidents.

The regional business offices are now all almost fully staffed and broad authorities and responsibilities have been delegated. In other words, they have "evolved."

## II Structure and Operations

The charts which you have in front of you will give you a better picture of what the creation looks like in its present state of development than I can give you. Perhaps the most important point illustrated is that we have three "regional" officers in addition to the business manager. The significance of this is the fact that there are available in each RBO four key employees whose responsibility it is to be concerned primarily not with the day-to-day operations in our office but with the problems which arise throughout the entire region.

Not only are solutions sought for these problems, but the situations which give rise to them are explored with a view to removing the cause. Sometimes, of course, our suggestions cannot be used because of circumstances of which we are not aware. We still have a great deal to learn about the various programs and their particular needs. I sometimes think if we could have Roscoe give us a "short course" on ADE, Jim on AIQ, and all the other administrative officers on their respective Divisions we could reach the point where we shall be rendering fully effective service to the field units a whole lot more quickly than we shall otherwise. However, quite a few instances have occurred in which we have been able to make some contribution along this line. These have ranged from rather far-reaching proposals which require study and clearance by the Administrative Divisions here in Washington to relatively simple things which nevertheless solved an annoying problem.

For example, when we began the payment of indemnity claims for your Division, (In the ERBO we pay about 25,000 claims a year and we do not have the largest number. That distinction belongs to Bill Edwards and his folks in Minneapolis) we soon found we were getting letters in almost every mail asking that we

identify these checks for those who received them. From the tone of these letters it was evident that many of the writers were more than a little upset so we were in the unenviable position of sending a man some money and getting him angry with us at the same time! By the simple device of having the Treasury Department agree to print "Animal Indemnity" on each such check, these letters have virtually ceased. We save a considerable amount of time by not having to trace checks and prepare replies but the important thing is that we have been able to correct a situation which was creating poor public relations and making your work in the field more difficult.

Each of the Regional Officers recognizes that his primary concern must be with the problems which arise in the field or develop in the course of our working with the field units. Consequently, you should feel free to bring matters to our attention or ask for guidance in the areas in which we operate. We do not consider these requests as an extra duty or unwelcome intrusion in the flow of paper work with which all of us are confronted. On the contrary, we consider these to be our main duty and the measure of success we have in meeting these needs is largely the measure of the value of the regional business office.

### III Services Rendered

In some quarters I might hesitate to pose these questions but I feel I can try it here - What is the end product of all this and what can the RBO's do for you in the field?

Now that I look at these questions, I hope I can cope with them! I would say in summary that the principal benefits derived from the establishment of the regional business offices have been: First, the development of a better understanding in ARS administrative units of the problems in the field and the circumstances and situations which give rise to those problems. Second, the RBO's have been the means through which a closer association between the personnel of field program units and those handling their administrative activities has been achieved. The mutual understanding and appreciation of the other fellow's views and problems which has been developed is having and will continue to have a profound and highly satisfying effect in all areas of administration. Third, the time required for handling many types of actions has been materially reduced. And, finally, the establishment of the RBO's has opened the door to a coordination of activities between ARS units and the interchange of information and experiences which will most certainly work for the betterment of all. While we are speaking of this, I must mention the relationships which have been developed between the RBO's and the Division administrative units; with Mr. Morgan, with Mr. Shook, Mr. Hutchinson, and all the rest of their staffs. On this point, I can only say if the progress made here has been as satisfying to them as it has been to us, we are well on our way to building a close-knit, effective team which will be a credit to ARS and the Department.

But now, what do we do? In addition to the duties which are implicit in the delegations outlined above, we can and do provide a variety of services. In procurement, we attempt to find better sources of supply and simpler ways of meeting your needs. The use of the blanket purchase order arrangement for tires and tubes so that these no longer need to be stocked in attics or

cellars and yet are available immediately when required is one example with which many of you are familiar. The large volume of our purchases has made us acquainted with many suppliers all over the region and enables us to locate hard-to-find items or recommend equipment to meet special needs. The feed mill which Bob Priode of the Beef Cattle Station at Front Royal purchased to solve his problem of the custom grinding of feed led to the purchase, from the same little-known company located in a small town just west of Philadelphia, of a mill by the folks at Plum Island so that they are no longer dependent on commercial concerns to meet their needs for special feeds.

In our Finance Section we no only endeavor to process the payrolls and reimbursement accounts promptly but review the latter to see if helpful suggestions in their presentation can be made. Some patterns of furnishing needless details have been developed in some units over the years. When we notice this we call the supervisor's attention to the fact that accounts can be prepared in a simpler fashion.

The regional aspects of our personnel program are being expanded as rapidly as possible and as you may recall if you see a copy of our "Administrative Notes" we recently offered a retirement counseling service of which quite a few employees have already availed themselves.

This, then, is the story of the regional business office. Perhaps some of you will wish to raise questions concerning the information presented or on some other phase of our operations. If so, I'll do my best to answer them though I'll start by saying that if you accept the common definition of a specialist as "one who progressively knows more and more about less and less", I'll ask you to consider the plight of the business manager who is a generalist and thus is in the position of steadily knowing less and less about more and more!



## SELECTION AND PLACEMENT

by  
Mr. W. F. Leffler

My talk today will be directed to the processes followed in the employment of persons by the Agricultural Research Service. In the time allotted I will try to explain (1) our recruitment activities, (2) the manner in which selections are made, and (3) what we try to accomplish in the placement of personnel in the right job. As I explain these activities I am certain that you will realize, if you don't now, that a group of personnel technicians in an office here in Washington or in an RBO cannot do the job alone. Obviously then supervisors have an important role in the personnel program.

Basic to recruitment is the development of qualification standards so that we may know what type individual we are looking for. Qualification standards are set up to include basic education requirements, that is, the degree needed and the specific minimum course work an applicant should have. There is also an experience requirement which is usually based on a certain number of years in a specific type of work of a certain quality level. After developing what we want, we then develop our sources of supply. Normally in government, these are the various Civil Service Registers. Lately, the point has been reached where these registers do not furnish a sufficient number of eligibles in many of the scientific fields, and this is particularly true in the veterinarian field. Several means are used in ARS in developing these sources of supply.

One method of recruiting which we use is personal recruiting by our scientific staff. For example, in the veterinary field we have representatives who are located at the various veterinary schools who talk to the classes; meet with students, give them advice and counsel as to career opportunities in the Federal government and urge them to apply for the veterinary trainee examination. We have also developed the same type of program with the agricultural economists. There are, I think, about 30 or 40 agricultural economists all over the country who are asked to do this personal job of recruiting, going to the schools and talking to the classes, etc.

In order to take full advantage of the many fine contacts we have at the various colleges and universities, we are in the process of developing an ARS wide coordinated college recruitment program. To begin with Dr. Shaw will designate an ARS employee stationed on the campus of each Land Grant College to serve as our representative at that institution. It will be his responsibility to see that the needs of ARS for personnel are made known and to furnish us with information concerning students at his college. We in the Employment and Placement Branch will be responsible for maintaining a system which will keep these representatives informed on current vacancies in ARS. Time does not permit a complete discussion of this program, however, we believe that because of our unique situation of having employees so closely allied with the colleges and universities we should be able to attract more

college graduates.

In addition, program people who attend various society meetings, who have friends in industry or working for States, etc., can be particularly effective in the recruitment of scientific personnel. This is something that obviously two or three people sitting in Washington cannot do, so we have to depend to a large extent on the program man in the field.

I would like now to discuss selection, and will stick pretty much to Civil Service selection process, trying to point out the part program people play in this process. I will make references to the Agricultural Research Scientist examination which is the major examination of interest to ARS. The qualification standards were established by taking the various options or disciplines and getting committees of scientists to work with us on basic qualification statements, which are taken to the Civil Service Commission for review and approval. Included are the various educational, experience, legal requirements, age, citizenship, what happens if you are a veteran, the physical requirements, etc. After this has gone through the CSC and been approved, an announcement is issued and sent to all first-and second-class post offices. Interested agencies get a large supply that can be distributed to field organizations. Usually, the examinations for professional positions are what we call open continuous. In other words, a person can apply for it at any time. Most of them are unassembled, based entirely on the education and experience shown on an application.

Next the committees of scientists are brought together to develop the rating schedule against which the applicants' qualifications are compared. Education is broken down by courses and experience by qualifying, (with indications of quality levels) and non-qualifying. This is again reviewed, and when approved by the Commission is sent to our Boards of Civil Service Examiners. The CS Boards are composed of people experienced in the fields covered by the examination, entomologists for entomology, veterinarians for veterinary options, etc., who actually rate the papers. Briefly, when the announcements are out and rating schedules established, we begin getting applications. These are reviewed by program people on the panel. There is one little "gimmick", the use of vouchers, in the Agricultural Research examination not present in most other professional examinations of the Department. We have felt for years, particularly in the biological sciences that I am familiar with, that the examining process was not getting the best candidates. One reason was that a man with a degree was given credit for the number years of experience that he had irrespective of the quality factor. So, we have minimized the length of experience, as far as points are concerned and have gone to what we call a voucher or qualifications inquiry which is sent to all of the employers of an applicant and all of his professors or deans of the colleges, people who knew him at college. Included are questions as to ability, knowledge, application of knowledge to a problem, ability to follow through clearly, whether or not the applicant has professional integrity, and a little about his character, etc. When a reply is received, we have what we hope is a

very good qualitative analysis of the applicant; the factors are all taken into consideration, averaged, rated, and the applicant given a rating from 70 to 100 plus the 5 or 10 points for veterans preference. From this, we have a supply of eligibles for employment.

I will now discuss actual selection of individuals who have passed an examination. When we get a request to fill positions, we request the Board of Examiners to certify names from an appropriate register. We contact each person certified to determine whether he is interested and available for a specific job. When replies are received, we usually find that some of them are not interested in a given location, thus eliminating them, and those who are interested are referred for selection. Selection must be made from the three top names on the register, although the particular man wanted might be fifth or sixth down the line. After selection is made we proceed with a certain amount of pre-employment inquiries, checking references from former employers to determine suitability, and process the appointment notifying the Branch that the man is appointed.

This is the process that we go through for a CS competitive appointment. A person so selected gets what is called a career-conditional appointment, the first year of which is an extremely important probationary period. Unfortunately, most of us have not viewed it in its proper light for it is, in fact, an extension of the examination. An employee should be watched carefully during this period and given necessary guidance, helped along the way, but also should be watched for shortcomings that cannot be corrected, since during this one-year period a person who cannot "cut the mustard" should be separated. After completion of the probationary period, he becomes a full-fledged employee and would have to be separated through "preferment of charge of misconduct" or through the route of "unsatisfactory performance" rating. In your operations, when you receive a request for a 10-month appraisal of a new employee, remember that it is a sort of a final examination, the final piece of paper that goes into a man's personnel folder as far as the examining process is concerned.

Now, we come to the job of placement. As I view the term, "placement"; it is really the movement of employees between jobs within an organization rather than bringing people in to fill jobs. Two major things have to be considered: (1) the needs of the program, and (2) the review of the individual. Most frequently placement is linked with the old expression of "round pegs in square holes" which is because employees not properly placed usually make the most noise and give the most trouble. Actually, placement goes on all the time with adjustments within an organization. The consolidating of the several bureaus into one large organization such as ARS involved quite a bit of placement. The establishment of the RBO's required another rather major shift. When the RBO's were established, there was a surplus of about 100 employees, particularly in the fiscal area, whose jobs were being washed from under them. We immediately had to try to find places for them, places they could fit into and do a job. We put on what is known as a "freeze" in ARS, and requested the Department to do the same for other agencies in USDA. This resulted in an order which pro-

hibited outside recruitment until these employees were placed. At first, it was relatively easy because agencies could select from these displaced persons the ones they wanted. Finally, the best ones were taken, leaving those with less training or personality factors or something, and it grew harder and harder to place them. We finally got through this, and did not have to have a reduction in force.

To summarize, there are two types of employment: (1) the formal type which I have been discussing here; the type where recommendations come in to the personnel office, the personnel office handling the many details necessary before an employee is appointed by processing of a personnel action on a Form 50, sends it to the branches, to the employee, to the supervisor, and the payroll office; and (2) the Letter of Authorization type which has been a subject of a lot of conversation the past two years. It's an old, long-standing authority that was used by the different bureaus through the years - 20 years, maybe longer, to my knowledge, to hire on-the-spot temporary people. It is becoming more formal as time passes. Now as the CSC gets more and more active in the personnel field, it is beginning to require formalities that were not needed in the past, and we are having to meet all the legal requirements for L/A employment that we do for formal employment. It is our hope to make it possible to hire under L/A on-the-spot by filling out a relatively simple form. We have tried to incorporate into one form the application, oath of office, affidavits, and personnel action.

That is a quick rundown on employment and placement. It is like the weather, you can talk for five minutes or five hours about it.

## POSITION CLASSIFICATION

by  
Mr. A. LeRoy Sykes

I would like to start out by giving you a little background on the Classification Act. For approximately 140 years, this government functioned without an orderly system for determining employees pay in relation to the duties and responsibilities assigned. Prior to World War I, the Congress, by appropriation action, would authorize a specific number of positions at each of the then existing salary levels. No criteria were prescribed which assured the employment of a veterinarian at a salary higher than that paid to the newly-employed messenger.

Salary levels for new employees were generally determined by the salary level attached to the statutory vacancy. This statutory arrangement continued until World War I, when Congress appropriated lump sums for defense activities and authorized the agencies to set salary rates within reasonable limitations. However, no authority was authorized whereby the agencies could adjust salary levels for statutory positions. Armed with the new authority, agencies established salaries for new employees that were required by the law of the market. By 1920, a chaotic situation had developed and action was initiated by the Congress which led to passage of the first Classification Act in 1923. With several amendments, this Act remained in effect until 1949 when the present Act was passed. Likewise, the Act of 1949 has been amended several times.

The Classification Act of 1949 applies to most of the employees in ARS. However, several large groups such as (1) employees who receive part of their salary from other than appropriated funds, (2) employees whose compensation is fixed by cooperative agreement and (3) employees in recognized trades and crafts or other skilled mechanical crafts, laborers, etc.

At present, we have the GS compensation schedules, however, prior to September of 1954, the CPC schedule was in effect. At present, all positions that are subject to the Classification Act are classified to the GS schedule.

Responsibility for administering the Classification Act lies with the Department Office of Personnel, the agencies of the Department and the Civil Service Commission. The Office of Personnel acts for the Secretary in co-ordinating the classification policies and activities. This is important, because such coordination contributes materially to equal pay for substantially equal work. ARS is responsible for making studies of work assignments and applying proper standards in order to arrive at the correct classification. The Civil Service Commission is also responsible for writing rules and regulations for preparing detailed standards to be used by people who classify individual positions.

Position classification as used in the Federal Government is probably the best system that has been devised for determining salary rates. This evaluation is fully supported when we consider that numerous states, counties, and cities in addition to numerous private organizations have adopted a modified system of attaining required consistency in employees' pay. Recognizing that position classification in itself will not assure such consistency, it is an accepted systematic approach to achieving it.

Numerous fallacies relating to position classification have developed during the past 30 years. A few are as follows:

(1) Among supervisors, there is sometimes found an erroneous notion that position classification unduly restricts them in assigning work and delegating responsibility. This notion probably stems from the fact that the assignment of work and delegation of responsibility affects grade levels of positions.

(2) There is sometimes found an erroneous notion that a position description is restrictive. The source of this notion is unknown, since a position description is supposed to be exactly what the two words imply, namely, a description of the work and responsibilities assigned by a supervisor to an employee.

(3) Occasionally, we meet an employee who is of the opinion that he can refuse to perform tasks that are not identified in his position description. If this were the case, then I think we could all agree that the GS-9 Position Classifier who may have written or classified the description and thereby circumscribed the assignment, is grossly underpaid.

There are other fallacies such as use of magic words, the agency can do what it wants to, etc., that are equally fallacious.

The Classification Act gives to the employee two basic rights, one is the right to appeal the classification of his position to the Department and/or Civil Service Commission and the other is the right to insist on consistency between work assignments officially described and assignments evaluated for performance.

In classifying positions, we have four basic factors that we use, of course, they'll vary from job to job. And they are: (1) responsibility, (2) authority, (3) difficulty or complexity, and (4) knowledge that is required to do the job. If you want to sit down at any time and classify in your own mind any of the jobs that you might have responsibility for, make a comparison of the responsibilities, the authority delegated, the difficulty or complexity (there you can get into some fine-line discussions and disagreements), and the knowledges required to perform effectively in the job.

Frequently, you will find an employee who brings to the job, qualifications far beyond those required. But in evaluating the position for classification purposes, you take into consideration only those qualifications or knowledges required to do the job, not what the employee possesses.

Classification cannot be effective if supervisors and management take the position that administration is entirely the responsibility of the Personnel Division. We consider it a joint responsibility of management, the Personnel Division, supervisors and the position classifier. They must share the responsibility if classification is to be effectively administered. For example, John Doe is working for you, and you the supervisor feel that his grade is not proper. It's your responsibility as the supervisor to bring that to the attention of the proper people through the chain of command in your organization. When the classifier receives it, he will work with the supervisor in defining the job and then classify it. When a position changes, the supervisor knows it first, therefore, if appropriate classification adjustment is to be effected, the supervisor must initiate the action. Periodically, we post

audit positions but when you consider that we have 14,000 employees, you don't get around to all positions. Frequently, we incur situations where the supervisor says, "I've wondered why nothing has been done about this matter." We point out to him that he can't depend on us to identify such situations.

In some peoples' minds one weakness of the Classification Act is that it does not provide techniques for compensating employees for outstanding efficiency or production. If you stop and think for a moment how you would do it, I think you would readily understand why no such provision is made. Such a system would require the establishment of standards of performance for each grade and for each type of position. Some agencies have tried it in mechanical type jobs. They used it for jobs such as card punch operators, where they set minimum requirements say for grade 3 positions. Assume for purpose of illustration, that the GS-3 was required to punch 10,000 cards per day. They found out that many employees could punch 10,000 cards a day, but the degree of accuracy varied from 50% to 90%. After this experience, they adjusted their production figures and associated it with minimum accuracy requirements. The result of such adjustments was lower production.



EMPLOYEE RELATIONSHIPS,  
DEVELOPMENT AND CONDUCT

Mr. W. J. Biehl's discussion on the organization and the functions of ARS as related to Livestock Regulatory Programs was given extemporaneously. Therefore, his speech was not documented for presentation in the Conference Report of the Fourth Veterinary Administrator Development Program.



## SAFETY IN ADE AND AIQ

by  
Mr. Dale Harper

This matter of safety is one of increasing importance to all of us, especially those in supervisory positions. Shortages of personnel emphasize the need to conserve what we have. Then, too, it costs too much in dollars to pay for accidents. I don't know all of the answers to the safety problems in ARS, but during this period I am going to tell you some of the things that we have found in the records. I also want to discuss a few ideas with you for reducing the number of accidents and injuries to our people.

An inspection of the record (slide 1) indicates that ADE does about 40% of all driving in ARS. AIQ does a lesser amount - a little over 2%. From these figures (slide 2) you can see quite a range by divisions in the number of miles driven per reported vehicle accident. (slide 3) ADE drove 145,756 miles per accident, AIQ 125,140, ARS 178,889, Forest Service, 183,589 and Soil Conservation Service, 295,383. Even after allowing for a difference in driving conditions, it is obvious that there is plenty of room for improving vehicle safety in ADE and AIQ.

Our reports indicate that most of our vehicle accidents happened during daylight hours, on good roads and during good weather. Practically nothing was wrong mechanically with any of the vehicles. From this it is evident that most of our improvement in vehicle safety will be with the driver. He must acquire the habit of driving safely. Many accidents are the fault of the "other driver." To avoid accidents caused by someone else, our drivers must learn DEFENSIVE DRIVING. (slide 4) Defensive driving is anticipating what other people on the road may do and being prepared for it. Using good manners while driving not only results in a better reputation for the Service and Division, but reduces accidents.

In addition to vehicle accidents, our employees are being injured by improperly restrained livestock. In case after case, an animal injures the employee or causes him to injure himself or another employee. Strained backs, infections from dust in the eye, and horses falling with the rider, add variety to the list. (Discuss several accidents as reported on SF-92.)

All accidents are the result of an unsafe physical condition, an unsafe act or an unsafe personal factor. (slide 5) A vehicle with worn out tires or an unrestrained animal are examples of unsafe physical conditions. An unsafe act is a violation of a commonly accepted safe procedure such as driving at high speeds with poor tires or vaccinating an unrestrained animal. An unsafe personal factor is a mental or bodily characteristic that permits or brings about the unsafe act. Examples are improper attitude, lack of knowledge or skill, and bodily defects. If we are to reduce the number of accidents, we must remove or correct unsafe conditions, train our employees to habitually avoid unsafe acts and make allowances for unsafe personal factors. Many unsafe acts are avoided if the employee is trained to his work correctly.

Accident reports are made and records kept for two primary reasons. (slide 6) One reason is to provide compensation for disability and death and full medical care to the injured person. The other is to guide the effort to prevent recurrence of that kind of accident. Reports must be complete and

accurate and must be forwarded without delay to be of greatest value.

There is ample opportunity in most Divisions in ARS for saving a large amount of money by reducing accidents. (slide 7) We plan to do this by approaching the problems on a Division basis. One Division will not be compared to another because of the differences in problems. Divisions will work together, however, on problems that are common to two or more of them. Close attention will be given to accidents in each division. We will study the facts, such as where they occur, when they occur, what corrective action has been taken and the trend of injury and vehicle accident frequency rates. The effort made by responsible supervisors to conduct a reasonable safety program with their people will be encouraged. Corrective protective procedure will be devised and installed where needed. With the program based on facts and with intelligent cooperation from all concerned, there is no doubt but what we can greatly reduce the number and severity of accidents in ADE, AIQ, and all of ARS.

## ADMINISTRATIVE MANAGEMENT

by  
Mr. R. W. Morgan

I would like for a few minutes to discuss with you some of the duties, responsibilities, and functions of the Administrative Office of the ADE Division. In the first place, I think that basically, with your education and the experience you men have had in field work, and as you go through the training process, you should have very few problems or difficulties with your professional and scientific work. Certainly you are educated to the point where that phase of the work should not bring about too many problems. At first, your problems may be in the administrative field and as you go into this training period at the several stations, I would suggest that you pay particular attention to the administrative phases of the office operation. I would assume it is something in which you have had, as yet, very little training.

Now, to start with, we might just as well go into the administrative office in ADE. We call the office by various things. Sometimes we call it a "unit"; I prefer to call it a "section", but our activity is not so reflected on the organizational chart. Nevertheless, in my opinion, our operation equals other sectional operations in the Division. That, of course, is purely a matter of opinion. Without any hesitation, I would like to tell you folks that I am extremely proud of the job that our people have done, especially during the last three years. We have some outstanding key personnel in our office in the persons of Mr. Hutchinson, whom many of you know, and of Mr. Hedin, with whom you have become acquainted in the last few days. You have heard various ones speak of efficiency ratings and how you should rate your men. It has always been my conviction that a man makes his own efficiency rating, that he is in a better position to know what his efficiency rating is than the man who is rating him. You know, and I know, whether we're doing a job. And, as I say, because of that very thing and of the work we have performed, and the results we have obtained, I have no hesitancy in saying that the Administrative Section has done an excellent job.

Within the office we have the work broken down as a matter of organization into two units. One is under the supervision of Mr. A. C. Hutchinson, who is responsible for all Division fiscal matters, fiscal reports, program reports, changes in regulations and amendments thereto, all drafts, charts, and visual aids that come out in the way of educational material as well as many special assignments which are referred to the unit for action.

In the other unit, Mr. Hedin supervises the Division work applicable to personnel, administrative services, procurement, and many other phases of the office operation. There are too many of them to go into in detail. It's sufficient to say that both Mr. Hutchinson and Mr. Hedin, in turn, have qualified assistants. I believe in free delegation of responsibility and recommend it to you. If you delegate responsibility to qualified men, they will accept it. If you don't give it to them, if you don't hold them to it, you're going to have more of a job to do than you can possibly do yourself.

Now, in the fiscal field, I think you should know just a little bit about what we're faced with. You have heard the Budget and Finance people talk. Mr. Kirkham presented a convincing case on how to obtain money. Everybody around Washington and ARS feels that they have earned the appropriation by the time it gets through the mill and the bill is signed. Once it's signed, the allotment goes to Dr. Anderson, who in turn, passes the responsibility down to us, never overlooking the fact that final responsibility, in all cases, is with the Division Director. We, in turn, arrive at the allotments to the stations; this is done with the cooperation of and the result of many meetings and discussions with members of the Division staff. There are various angles attached to that, some of which you may be familiar with, and some of which you probably will become familiar with in due time. The allotments are made to the stations, the stations are held responsible for living within the allotment.

Over the last three or four years, we have done a very good educational and selling job to the men in charge to the effect that they shall not exceed their allotments, that they shall not spend and obligate more than they actually have available. Then we require from each station a station financial report at the end of each pay period. Those reports are of vital importance to us because the figures reported reflect to us the amount of money spent, the amount of their obligations, and the balance on hand. That's broken down into regular salaries, fee testing salaries, indemnity, travel, and all others. That's five items against each allotment, and there are three allotments which makes 15. We keep those records separately here. An identical breakdown is maintained in the regional fiscal offices. Our folks in the fiscal unit of our Division have 75 accounts to work with, continuously. It's a tremendous job when you think, in terms of, approximately 30 million dollars.

That's just a very, very, brief sketch of that phase of the work. Likewise, station program reports show herds and cattle tested, reactors, ring test, etc. Those reports are of major importance to us, too. And, as was brought out by a previous speaker, all we need is to have just one missing and we're stymied until we get that one.

We'll get over on the other side in the realm of personnel shortly, but I think we should point out right here that certain responsibilities rest with the program people in the administrative office in Washington, and certain responsibilities rest in the regional offices. Program management decisions must be made in the Division administrative office. We're particular about making those decisions, because it gets back to a point of control. Unless there is a specific control, if you have more than one office, drawing against the allotment without proper control--many of you who have joint bank accounts know what I mean--you're in trouble and that is the reason we must control our funds. The figures that we go on are the figures that we receive from the field. The RBO's furnish ledger sheets and we reconcile the accounts. We have to be sure that each regional office has enough money to cover all Division expenses and obligations in each account.

Over in the personnel unit of the office we attempt at all times to keep vacancies filled. We are charged with the responsibility of determining the need for additional positions as requests come in from the stations, determination is made as to the need for additional personnel, that's

our responsibility--program responsibility. For example, let's take one that's easy. A station requests a brucellosis technician; we decide that an additional man is necessary, approve the request, refer it to the appropriate RBO and they, in turn, process the appointment. I was afraid to say if a station requested a veterinarian that we would fill the need, because that frequently is not possible. We've had considerable success through the recruiting efforts of the Personnel Division and many others to the point where since the first of January we have employed 99 additional GS-7's and 45 GS-9's for a total of 144, and we've lost 23 for a net total of 121 veterinarians which is very encouraging. It's much better than we've experienced in previous years, and as time goes along, we probably will do better. I think that economic conditions have had something to do with the many applications we have received. As was pointed out by others, we have attempted to be selective in our choices.

Before we leave personnel, I might say that during 1955, representatives of our administrative office, visited every one of our field stations. We attempted to the best of our ability to determine their need for clerical personnel, equipment, and procurement items of all kinds. Whereas, prior to the expanded brucellosis program some offices only had two or three office employees, some built up to 15 and 20 depending on their need in line with the acceleration of the program in the particular State. It was necessary to furnish those new employees with typewriters, desks, chairs, adding machines, and many other things. With the acceleration of the milk ring test, we've had to buy many mobile trailers and equip them. During 1956, we visited over half of the stations, including Puerto Rico, and this year we plan to visit all of them again. As a matter of fact, I think that I may safely say that the Administrative Section is the nerve center of the Division. There is never a dull moment, and there is always a request for something from somebody. Due to the very nature of some of our programs, action is necessary and must be fast, and, as a consequence, we receive many long distance telephone calls. A few of them, I think are unnecessary. For the most part, somebody needs something and he has to have it quick. That is where we fit into the picture so far as it integrates with the field programs. We have followed the policy of attempting to get anything and everything within reason that the man in the field needs to do his job, as fast as we could get it. The speakers from the three management divisions who have already talked to you are the people with whom we come in contact. We know generally who to go to to ask for what we need quickly. Sometimes I think maybe some of the field offices have become just a little too dependent upon us. They've become so used to that emergency service that sometimes we are a little skeptical, but we go along. It is also our job to see to it that if someone is failing to furnish the necessary service promptly, we attempt to find the cause and correct it. It's a policy in our office to answer all mail promptly and we become very unhappy when we hear from some station that they have written to somebody and that person has not answered their letter.

Now, so many points have been mentioned in a general way that many things I might say to you from a specific standpoint may either sound repetitious or seem to imply that I was referring to or taking exception to something

which was said by another speaker. Such is certainly not my intention.

There are three points that I want to impress on you if I can and as strongly as possible, and I am in hopes you will remember them.

First: You can anticipate, some of you at least, being assistants in charge and inspectors in charge as time passes. A point I would like to emphasize as strongly as I can is the close working relationships and cooperation between you and your administrative assistant or chief clerk in the office. That person can be invaluable to you. That person will keep you out of more pitfalls than you can dream could possibly occur. That person will keep you informed every two weeks or every month on your expenditures. You'll have roughly \$120,000, we'll say on your allotment, and if you spend \$10,000 a month, then you are doing alright, you are just about breaking even. If you're spending \$11,000 or \$12,000 a month, you are inviting trouble, because you are over-spending by a month. Your chief clerk will keep you currently informed on your finances, and that's something with which you must always be familiar.

Second: This matter of the budget. I am hopeful that many of you will be selected for detail to stations in this training program, and when you get there, I wish that you would take very, very careful note of how the stations plan their budgets, and how they go about doing it. Have the procedures explained thoroughly to you. There is nothing mysterious about estimating a budget. In the first place, you have fixed charges--you know just how much your regular salaries will be. In fact, we have tried to describe in detail how to go about doing it. You have so much for your regular employees, and your office force should know when within grade promotions are coming along. If you have an employee who is liable to retire, they can anticipate that and you can come up with a very accurate figure on your regular salaries. On travel, you have actual costs for the past two or three years and your estimate should be reasonably close. You should also be able to arrive at a reasonably close estimate, based on past experience, to cover your station expense. Your two intangibles, of course, are fee testing costs and indemnity. You cannot be so sure about that. Fee testing you can and should control. By observing the trend and knowing what your percentage of reactors is in a given county or area, you should have a pretty good idea, based on previous experience, what you may anticipate in the way of the number of reactors for the current year. The estimated number of reactors multiplied by the average indemnity per head in your State should give a reasonably sound estimate. We recognize, of course, that it is an estimate. Many of our figures are estimates. But those estimates must be based on facts and information at hand. I feel strongly that anyone who is off \$50,000 to \$100,000 on his estimate either doesn't know what his program is, doesn't have a program or doesn't have it under control. Now you may take exception to that. I'm willing to go into more detail anytime any of you want to, but if you know what you're doing, and we recognize all the real intangibles, weather conditions, veterinarians willing to work and veterinarians with a good practice not too interested, etc., your over-all estimate should be reasonably close. With the proper control in assigning the work--I'm talking about the Inspector in Charge down through your district super-

visors, who should know what is being done in their districts-- you should be in a position to govern the work. And, again, it gets back to supervision over your fee testing veterinarians. That is one thing that I would recommend very strongly to you, to go into that phase of the work when you are in training and find out how it's done and learn all you can about it.

Third: As large as the offices are now, you don't have the time, and you should not spend your time attempting to supervise the office personnel. That's the responsibility of your administrative assistant. When the brucellosis accelerated program began and we had to build up, and I mean build up, we built fast because in many States it started with a bang, fee testing schedules were approved, veterinarians started testing and indemnity claims started coming in, they really poured into many of the offices, and immediate action was necessary. We organized many of those offices with the top job as Administrative Assistant GS-7. We have five GS-9's now. And under the GS-7, we have an assistant as a GS-5, and at practically all of the stations, we set up three units, one for indemnity, one for fee testing payrolls, and one for records and reports; all of them as unit supervisors GS-4, and under the GS-4 supervisors the detail work was accomplished with GS-3's and GS-2's. I say 3's and 2's; I'm not in favor of 2's, never have been, but there are some inspectors in charge who prefer to appoint GS-2's and then promote them later on. So, by all means, establish mutual confidence with your administrative assistant. It works so well, and it works just exactly like it does here on a large scale. Dr. Anderson and our staff men have, I think I can safely say, complete confidence in the operation of our office. We keep them fully informed on everything of importance we think they should know.

Let's consider the fee testing veterinarians for just a few minutes. For sometime we've all been very much concerned with the supervision that we have in the field. Let's consider the GS-11 district supervisors. They don't actually do much, if any, of the routine work. Naturally, more can be accomplished by the District Supervisor supervising the work of ten men than one man could possibly do by himself. Now, we have to think in terms applicable to you men not having arrived as yet, and let's not go back to the stations with any ideas that are going to be in conflict with the policies of the inspector in charge because, after all, he is still in charge. But this supervision is of the utmost importance, and I'm not sure whether some of these disciplinary cases which are coming up, some of these irregularities which have come to light are because of more and better supervision or simply because we have more employees. When you consider that we have roughly 2,000 regular employees and more than 6,000 fee testing employees, there are bound to be, I suppose, a few individuals who take the little short cuts, want to get something for nothing, and get themselves involved. But somehow I'm inclined to think as I see some of these disciplinary cases develop that it is the result of more and better supervision. I hardly see how it could be otherwise, and yet, now and then we have a case involving a fee testing veterinarian which is first reported by a competitor. Therefore, the more supervision you can give, the more effective will be your program and it's something which is constantly being stressed from

the top all the way down. In the handling of your personnel relations, we expect that the fee testing veterinarians, when they visit a farm and test at our expense, should take enough time to discuss disease control and eradication with the farmer or rancher. It's not just simply a case of going out there and taking a blood sample and being gone again in a flash. The educational and informational part of the program should be stressed and is something that we must pay very particular attention to. I want to pass it along to you men for your consideration and for your observation as you're in training.

I don't know as we need to say much more about the misuse of Division automobiles. That's always a subject I like to talk about, but it doesn't seem to do much good. Those who are going to violate the regulations will violate them, no matter what you say. And you can be sure that once an employee is caught and convicted of the misuse of a Division vehicle he is going to pay the penalty.

Our primary function, as I said before, is to handle the business affairs of the Division.

I would like to leave this little thought with you, as I thought it might be appropriate. "There are three kinds of people; those who make things happen, those who watch things happen, and those who have no idea what happened." I'd like to think that you men are going to stay in that first group because this is a very, very fast moving Division. Action is the by-word, and we aim to keep it active. We want it active in the field the same as it's active in here.

It has been a pleasure talking with you. I wish I had more time. If you have any questions, I will be glad to try to answer them.

TRIP TO BELTSVILLE

Conference participants were taken on a brief tour of the Agricultural Research Center at Beltsville, Maryland. This provided them with an opportunity to see the physical facilities and discuss with research officials the programs and projects that are being conducted by the Agricultural Research Service and cooperating agencies.

## SUPERVISION

Notes from a discussion on supervision by Dr. R. J. Anderson, Director, Animal Disease Eradication Division, Agricultural Research Service, U. S. Department of Agriculture, at the Veterinary Management Development Program meeting in Cleveland, Ohio, on August 16-17, 1957.

Supervision. According to definition this means to over-see. However, our modern concept of supervision associates it with management which is that echelon of an organization that gets the job done through people. Supervision is part of management. In government we have a tendency to think of management as that part of the service dealing with personnel, procurement, and fiscal matters. Instead it is divided into administrative and program management below the level of management that directs the organization. You can see that there are different levels or echelons of management. My discussion today will deal with management that relates to supervision.

There are many misconceptions as to the meaning of supervision, brought about largely through lack of understanding and proper training on the part of some, and purely lack of wanting to be supervised by the other group.

I also like to think of supervision as appraising and directing.

### A. Appraising Operations

In one sense the supervisor directs-the program administered by his subordinates, and at the same time he appraises the program through the use of control technics.

1. Controls to measure performance
  2. Controls used to appraise results
- b. Appraising People

In a similar manner we can appraise people through the use of control technics. These technics generally fall into two categories.

1. Objective
2. Subjective

- (1) Such objective technics include devices for measuring skill, knowledge, aptitude, or behavior. They measure an individual at the time he is tested. He and only he determines what the results will be.
- (2) Subjective technics include devices which measure skill, knowledge, aptitude, or behavior. They measure an individual's capacity as revealed over a period of time. Persons other than the individual determine what the results may be. Possibly the best known of these devices is the merit system or efficiency rating. This involves the use of standards to measure performance which must be equally applied to all employees in the job family by all supervisors.

Before we can direct the program and supervise the administration of procedures by subordinates, top management must develop

policy and technical procedure for conducting the program.

The subject of program planning and development will be dealt with by another member of this panel. Once the program has been decided on, the different parts are given to different employees to administer. It may be compared to a deck of cards. Take, for example, the brucellosis program. Part of the program is dealt out to different units of the organization - antigen development and production to the laboratory section; procurement of vaccine to the administrative section; and testing, vaccinating, appraisal, disposal, and regulation enforcement to the field stations in each State. Each segment of the program is carried out through procedures designed to accomplish the mission of the unit.

The operations of each must be supervised to determine performance and results.

Is each program being carried out as designed?

Are the results measuring up to the goals and objectives set?

The performance and the results are directly affected by the performance of the operator (the veterinarian, the technician, the enforcement officer, etc.), assuming of course, that operation procedures are adequate.

#### Appraising Employee Performance

Before you can appraise or measure any thing or person you must have standards to apply to each. In appraising the employee's performance he (the employee) must know what he is required to do. This is covered generally in the job or position description outlining

the different things he may be called on to do in performing his job. A job description is not enough. He must be instructed in what to do and how to do it. This may be done verbally or through written instructions and procedures. Even this is not sufficient. The employee should be shown through demonstrations, pictures, movies, etc.

Once instructions and operational procedures are clearly understood, which must be determined by asking the employee or by observing his work, standards of performance must be developed in order to avoid the hazards of individual differences in our supervisors. However, this does not mean over-supervision. This is death to initiative which can be prevented by supervisor-subordinate understanding of supervision.

How do you develop standards of performance?

The subordinate outlines what he thinks he should do and discusses it with the supervisor, who should point out what should occur when performance standards are met.

When should this discussion take place?

Once or twice a year the supervisor should sit down at prearranged times in a formal atmosphere and tell each employee how he is doing.

He should appraise the results the subordinate has achieved on carrying out his assignment.

He should evaluate the methods used in obtaining these results. In doing this the supervisor should point out the great strengths in

his performance, and most important of all what the supervisor regards as the areas in which he needs to grow further. He should be given an opportunity to tell how he believes that he is doing, and what he thinks are the areas of skill, or knowledge, or attitude in which he wants to develop. The supervisor should ask him in what ways he or the organization can be of greater service to him. The subordinate should be told what is ahead for him, all things considered.

#### Growth Programs

The supervisor should work out with the subordinate a definite program through which he will achieve, during the ensuing period, the growth they both desire. This program should be practical, capable of accomplishment, and amenable to control. The goal is further modifications of behavior. It is achieved through changes in skill, or knowledge, or attitude, or habit, or a combination of one or more of these things.

Once such a growth program has been outlined to increase his value to himself and the organization, we must select the media which will most economically and efficiently produce this result.

There are many media but they generally fall into four categories:

1. What the supervisor can do to help.
2. What others in the organization can do.
3. What outsiders can do.

4. What can be done by outside sources - speech clubs, night schools. On the job training, or coaching is probably the most valuable media. Having decided on a program, it should be set down in a schedule that can be followed.

This step, and follow-up to aid in carrying out the schedule and modifying it if needed, is actually the pay-off step, for unless it is carried out, all that has been done up to this point may be lost.

#### Employee's Merit Rating

Much of our thinking in regard to merit or efficiency rating is out-dated. We used to think of applying the same rating elements to all employees, but there should be a different rating formula for each job family, and they should include items beside initiative, judgment, appearance, manner, etc.

A rating is no better than the supervisor's understanding of what each factor means.

Merit rating, just like performance standards, must be discussed with the employee.

Now for a few specific comments on field supervision.

Personnel acceptance of supervision is governed largely by their understanding brought about through an atmosphere of good supervisor-subordinate relationship.

Proper supervision can result in good morale which in itself is the by-product of accomplishment.

Proper supervisor-subordinate relationship exists:

1. When the employee understands supervision in its proper perspective in its relationship to management;
2. When the subordinate has confidence in his supervisor;
3. When the subordinate takes pride in work accomplishments, with the desire that his program results and performance be appraised by the supervisor;
4. When the subordinate is ready to call on the supervisor for assistance and guidance in the performance of his duty;
5. When the employee feels free to suggest changes in programs and procedures that would lead to improvement; and
6. When the employee is interested in self-improvement for the benefit of himself and the organization.

Suggestions on the approach to field supervision

The supervisor should have knowledge of the whereabouts of the subordinate at all times through means of an itinerary submitted to the supervisor and the Veterinarian in Charge on Friday preceding the next workweek. In addition to this, a work-schedule itinerary for each day's work should be left at the place of residence (hotel, motel, boarding house, or home) covering each day's work. This work-schedule should include a sketch of the roads, and stops where work is to be performed should be numbered on the sketch. The numbers should also be listed giving the name of the owner and the name of the premises and the time of day at which he expects to be there.

To achieve maximum benefit from supervisory visits, it is desirable that the employee be visited on farms and ranches while

he is actually performing official work. Here again, if proper supervisor-subordinate relationship exists the employee will welcome such visits from the supervisor. This is the best method for actual appraisal of the performance of the employee. The only employee who would resent this type of appraisal, if proper supervisor-subordinate relationship exists, is the one who is not meeting the performance schedules set for the position. Supervisor visits, wherein the supervisor notifies the employee of his pending visit, are of little value as far as measuring an employee's performance is concerned. However, such visits may result in the supervisor obtaining a fair appraisal of program results.

All of you, no doubt, have heard comments either by the supervisor or by the subordinate that supervision of this type would be "spying" on the employee and that that would be bad. This type of attitude reflects, definitely, improper supervisor-subordinate relationship. Supervisor visits, in which the employee is notified of the pending visit, and where the visit consists of meeting the employee at his hotel or some non-work place and discussing programs and inquiring as to his activities, achieve very little more than a telephone call from the supervisor to the subordinate in which the supervisor obtains no more knowledge of his performance than what the employee wishes to tell him.

A marked improvement has been shown in recent years in program and subordinate appraisal activities of the Division. However, there are areas in which the weakness in the appraisal is

very disturbing. The veterinarian in charge has the full responsibility for taking the action necessary to assure that the various program activities are being constantly appraised and each employee's performance likewise is receiving the proper attention.

In picking your supervisors be sure that they have the experience, the training, the qualifications, and the personality needed to establish the proper supervisor-subordinate relationship. This relationship, which I have mentioned many times, is a prerequisite to obtaining program and personnel appraisal.

Your subordinates can carry you and the organization on to glory or he can tear you and the organization down.



